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THE

LABOUR QUESTION

LECTURES

ON THE

LABOUR QUESTION

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BY

THOMAS BRASSEY, M.P.

AUTHOR OF 'WORK AND WAGES' AND 'BRITISH SEAMEN'

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PREFACE.

In offering to the public the following collection of addresses on the Labour Question I publish nothing that is new. I venture, however, to believe that the encouragement, which I have received, in my labours in the exposition of sound doctrines on work and wages to the rank and file of the armies of industry, may induce more competent teachers to work in the same field. The soil is fruitful; but it demands the labour of the husbandman.

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LECTURE I.

LABOUR AND CAPITAL.

ADDRESS DELIVERED IN THE WORKMEN'S HALL, BIRKENHEAD, OCTOBER 3, 1871.

N.B.—This and the succeeding Paper were prepared at the request of the Executive Committee on Labour and Capital of the Social Science Association.

I AM here to-night at the request of Mr. Frederic Hill and other members of the Social Science Association. It has been thought that something ought to be done on the part of the Association to prevent the recurrence of the deplorable industrial conflicts of which we are daily witnesses, and it has been proposed:

1. To tender the good offices of the executive committee as mediators in cases where a desire has been expressed for their friendly intervention.

2. To deliver lectures in various parts of the country on those branches of political economy which bear on the question of wages.

Connected as I am with this rising community, I have undertaken to deliver an address in your Workmen's Hall. Since I last addressed a public assembly in Birkenhead ten years have elapsed. In an historical

sense, the interval is short, and yet what changes have occurred! At the present time social problems are subjects of paramount interest. They are to be solved rather by the independent action of the people than by legislative enactment. Hence it becomes essential to diffuse among the industrial classes a knowledge of those subjects which most intimately concern their material, political, and moral welfare. I shall confine myself in the present lecture to the material advancement of the people; a subject which, though it may appear to be less exalted, it is essential to consider whenever the elevation of the people in higher things is under contemplation.

I shall begin this attempt to elucidate the wage question by reminding you of the universally accepted axiom of economical science, that the rate of wages is invariably regulated by the relative proportions of the capital available for the payment of wages and the number of workmen seeking employment. The only limit to the fall of wages is the cost of living. His wages must be at least sufficient for the maintenance of the workman. Thus the rate of wages being essentially dependent on the relation between supply and demand, it is not possible for a trade combination in the long run to exercise a controlling influence on the price of labour, though I readily admit that by concerted action workmen might often obtain an advance of wages at an earlier date. Our operatives have but a faint conception of the rise of wages which has taken place, in recent years, abroad, in countries where trades unions do not exist, and where the improvement in the workman's

condition is attributable solely to the increased demand for labour. I take a few figures from the tables given in a report prepared by Mr. Phipps on the industrial classes in Würtemberg. From these it appears that the average increase in the rate of wages in eight branches of manufacture and industry during the last thirty years amounts to from 60 to 70 per cent. In the building trades the rate of wages has advanced from 80 to 90 per cent., and this advance is fully explained by the unusual activity in the trade. As a general average, 69 per cent. might be taken as the increase in Germany in the daily wages for the different classes of out-door labourers.

Turning from Europe to the United States, the wages of skilled workmen average from 9*s.* to 15*s.* a day, and those of unskilled workmen from 2*s.* 6*d.* to 7*s.* 6*d.* It cannot be supposed that so great a difference between the reward of labour on the opposite shores of the Atlantic is due to the superior organisation of trades unionism in the United States. In New England there are powerful combinations among the artisans, but none among the agricultural labourers; while, on the other hand, as compared with the same class in England, the condition of the common labourer is, of all others, the most improved by emigration to America. And let it be observed that, as agriculture is the most flourishing, so it is the most important of all the industries of the United States. The annual value of the production of the leading industries has been estimated by Mr. Wells at 1,365,000,000*l.* To

this total agriculture contributed 658,590,000*l.* The demand for labour to bring under cultivation the vast tracts of land still unoccupied is such that it has never yet been satisfied. Hence a rise of wages, in strict conformity with an economical law.

It is in the power of workmen to raise wages most effectually by elevating the standard of comfort in which they were content to live. A desire on the part of the working classes for the fuller enjoyment of the blessings of civilisation not only tends to their moral advancement, but promotes the material progress of the country. On the railways of India it has been found that the great increase of pay, which has taken place, neither increases the rapidity of execution, nor adds to the comfort of the labourer. The Hindoo workman knows no other wants than his daily portion of rice; and the torrid climate renders weather-tight habitations and ample clothing alike unnecessary. The labourer, therefore, desists from work, as soon as he has provided for the necessities of the day. Higher pay adds nothing to his comforts: it serves but to diminish his energy and industry.

The organisation of the trades unions of this country is at the present moment engaged in an effort to reduce the hours of daily labour. I am not prepared to deny their right to refuse to work except on certain conditions. The limitation of hours, for which the workmen in Newcastle have been contending, is, under certain circumstances, a reasonable concession. The strength of their claim in that, as in all similar cases, depends on the profits realised by their employers, a

question upon which it would be presumptuous in me to offer an opinion. It is sufficient to say that, assuming that the rate of wages represented something less than the fair share of the remuneration which is due to labour, this increase of pay could scarcely assume a more desirable form than the reduction of the hours of manual toil.

While, however, I admit in a general sense the desirability of a reasonable limit for the hours of toil, in working out their ideas workmen are bound to pay due regard to the practical conditions of the problem. It is of no avail that English artisans combine to obtain an improvement in their lot, when multitudes of foreign artisans are prepared to accept the terms which they have rejected. Great objections have been raised to the course adopted by the masters at Newcastle in seeking to attract foreign labour to their workshops. The English workmen object to the foreigner being brought to England to work for lower wages than the Englishman would accept. What would the Englishman say, I venture to ask, if foreign labour were imported and paid at higher rates than are given to the English workman? Yet this latter case was exactly what occurred in the commencement of railway enterprise in France. An engineering establishment was formed at Rouen, and Mr. George Harrison, now at the head of the Canada Works, was a member of the staff. The mechanics who constructed the locomotives, and were afterwards employed as engine-drivers, were almost exclusively Englishmen, and the wages they received were higher

than the wages of the French mechanics. On the railway itself English navvies were employed, in large numbers, at double the pay the native workman was thought worthy to receive; yet there were no riots nor remonstrances, on the part either of the mechanics or the labourers in France, in consequence of the introduction of the English workman.

The trades of England would do well to appoint representatives to examine the position of the workmen in the corresponding trades abroad. I wish that Mr. Odger and other leading champions of the rights of labour would, for a while, lay aside their aspirations for political fame, and take post at Geneva as the watchful sentinels of British labour. Our workmen are not sufficiently alive to the necessity which exists for the utmost effort and ingenuity, to enable capital invested in England to hold its own in the industrial campaign. There is a notion that profits are higher in England than elsewhere. The large fortunes occasionally amassed in British industry are quoted in support of this assumption. But these rare accumulations of wealth are generally the result of exceptional thrift rather than exceptional gain. The low rate of interest, which capital usually commands in England, as compared with foreign countries, is a conclusive proof that the profits of our trade are moderate.

It is extremely difficult for the industrial classes to determine when they may fairly press for increased wages. A knowledge of the state of trade is essential. The readiest means of obtaining that knowledge would be an inspection of the employers' books, but the fluc-

tuating returns of industrial enterprise render such an examination practically impossible. How then is this knowledge of the state of trade to be obtained by the working classes from a source on which they might rely? I answer, by the introduction into every trade of the co-operative element. The co-operative principle has hitherto been applied principally to retail trade. But my reference points rather to the more difficult organisation of productive industry. While I do not expect a general substitution of co-operative industry for private enterprise, the recent blue-book on the industrial classes abroad is full of encouraging examples of co-operative organisation. It has been largely and successfully developed both in Vienna and in North Germany, under the energetic guidance of M. Schultze Delitsch. In New York the Tailors' Association recently announced that their aim would be henceforth to abandon the system of strikes, and commence to fight with the strongest weapon—co-operation. Several co-operative land and building-societies and foundries have been established. An iron foundry was started in 1866 at Troy, in New York, with a capital of 2,750*l.* During the first year 32 men, during 1869, 85 men, were employed, the skilled men earning 35*l.* a year more than in an ordinary foundry. If co-operation were more largely introduced into British industry, the workmen would have a standard, by which they could determine the rate of wages in their respective trades. They would know that they could not expect from their employer a rate of pay exceeding that which was given in a co-operative

establishment, where the workmen themselves sat in judgment on the relative claims of capital and labour.

Some advantage too may be expected from courts of arbitration, on the plan recommended by Mr. Mundella and Mr. Rupert Kettle. These courts of conciliation are an imitation of the Conseils des Prudhommes in France. Each council is there established by decree of the Government, and consists of a president, a vice-president, who are not necessarily either employers or workmen, and six members elected by employers and workmen. The general aim is to obtain a settlement of trade disputes by judges who are the equals of the disputants.

The proceedings are inexpensive, the judges are unpaid, and a delegation of the council, consisting of one employer and one workman, sit in judgment almost daily. In 95 out of 100 cases brought before these tribunals a reconciliation is effected between the parties. Though appeals are permitted to the superior courts of law, they are rarely made. It is melancholy to think how true it is that one-half the world knows not how the other half lives. In our great cities the tendency of the different classes to occupy separate quarters brings many social evils in its train—want of sympathy, indifference, it may be hostility, between the poor and rich. It is much to be lamented that our successful employers of labour are so anxious to withdraw from the scene of their labours, and become country gentlemen, members of Parliament, or residents abroad. The love of field sports, which makes country life so attractive, the patriotism, which

sends the man of business to the House of Commons, are doubtless admirable traits in the national character; but the withdrawal of the personal influence of the employer, just when it is becoming most valuable, is much to be regretted. In the continued residence at Birkenhead of the distinguished man of business, Mr. Laird, who so ably represents the constituency in Parliament, you have an example which I hope may be more often followed. More frequent and familiar interchange of thought would break down the barriers which divide the different orders and conditions of men, and a kindlier spirit would pervade the atmosphere in which we live.

LECTURE II.

CAPITAL AND LABOUR.

DELIVERED AT THE LECTURE ROOM, NELSON STREET, NEWCASTLE, OCTOBER 11, 1873.

N.B.—The strike for a reduction of the hours of labour to nine per day had been settled on the same day.

I APPEAR to-night, not as a capitalist, not as an employer of labour, but as a philanthropist. I owe much to the industrial classes, and freely acknowledge their claims on me. The hard struggle in which you have been engaged is now happily at an end. While I hope that all the bitterness of feeling which such a conflict must inevitably arouse will be removed, I also desire that the memory of the sacrifices which the long cessation of business must inevitably impose, not only on the workman but on his employer, will dispose both sides to seek for a more rational and friendly means of adjusting future differences. I shall venture to recommend three suggestions to your favourable notice:—I. That the industrial classes in this country ought to watch with greater care the fluctuations of the labour market abroad. II. That the creation of some esta-

blishments, in every branch of industry, on the co operative principle, would supply a standard rate for wages to which the workman might with confidence refer. III. That it is most desirable to establish in every important centre of industry a court of conciliation, or some other organisation of a kindred nature.

Let me explain more fully the practical effect of the suggestions which I have made. Here, in Newcastle, you have been contending for a reduction of the hours of labour. Now, shorter hours are an increase of pay in another form, and assuming that the profits of the trade, in which you are engaged, justify a rise of wages, there cannot be a more legitimate mode of raising wages than by reducing the working hours. It must, however, be remembered that trades which can only flourish by successful competition with the foreigner, must, to a certain extent, be regulated with reference to the rules established abroad. In the United States the usual hours of labour are ten a day. Constant efforts have been made to obtain a reduction; but hitherto no concession, as regards time, has been granted, without a corresponding diminution of wages. In Massachusetts engineering establishments run ten, and cotton and woollen factories eleven hours a day. In Germany, France, and on the Continent generally, the working hours are longer than with us.

A reduction in the hours of labour does not necessarily involve a corresponding reduction in the amount of work performed. A little more diligence will easily enable a workman to get through as much work in nine hours as in ten. A few years ago M.

Dolfuss, the great manufacturer of Muhlhausen, offered to reduce the working hours in his establishments to the extent of one hour a day, without reduction of pay, provided his workpeople would undertake to do an equal amount of work in the shorter day. In a month after the offer was made the hands in the employ of M. Dolfuss had succeeded in making the production of the shorter day equal in amount to the production of their former longer hours. On this subject some interesting information has been collected by Mr. Redgrave, as to the rate at which machinery is habitually run in the principal seats of textile manufacture on the Continent. As a general result, it appears that, in proportion as the hours of labour are lengthened, the rate at which machinery is run are reduced. In Russia, where the longest hours of labour prevail, machinery is run at a slower rate than in any other country in the world. It may be inferred from these illustrations that it is in the power of the workman, by increased exertion when at work, to make short hours of labour—speaking, of course, within reasonable limits—as profitable to his employer as the longer day. He must take care that he does not, by working shorter hours, so increase the cost of production in England that competition with foreign industry becomes impossible. If this should be the result of shorter hours, the English workman would soon find his employment diminish, and a return to longer hours might become necessary, in order to recover the business which had been lost.

It has indeed been justly urged that in an industry in which machinery is the principal instrument of

production, no exertions on the part of the operative will compensate for the loss sustained by the restriction of the hours of labour. The solution of this difficult problem must in the end, I anticipate, be found in the employment of additional labour. It is impossible for the human machine to keep pace with machinery made of brass and iron. But why should not the machine, which never tires, be tended by two or three artisans, relieving each other as one watch relieves another on board ship? In driving the machinery of steam-ships it has been found necessary, on all long voyages, to have three sets of engineers and firemen, who are on duty eight hours in the twenty-four. Why should not the day be divided into three periods of eight hours, or the working day be extended to sixteen hours, two sets of men being employed? The change arising from the increased and increasing use of machinery seems to render corresponding modifications in the application of labour to industrial production essential. Sooner or later I confidently believe that the system already adopted at sea will be applied, *mutatis mutandis*, to the management of machinery ashore.

There is no cause to fear that the workman will decline to put forth his best skill and greatest energy when encouraged to do so by the hope of reward. In my small personal experience I have seen much to confirm the opinion, expressed by Adam Smith, that 'workmen, when they are liberally paid by the piece, are very apt to overwork themselves, and ruin their constitution in a few years.' Quite recently I looked

through the report of the Engineers' Union. On examining the list of members deceased during the previous year, I was grieved to observe so many premature deaths, so few occurring at or near the age which in Scripture is given as the allotted term of years of frail humanity. Though it would, in the present condition of trade, be simply impossible to entertain the notion of a further reduction of hours, I hope to see the day when the progress of mechanical invention, and habits of greater diligence on the part of workmen, may enable them to earn as good a day's wages, and do as much work for their employer, in eight hours as in nine. In order, however, to accomplish so great a reform, the trades union must no longer interpose, enforcing upon all workmen a regulated diligence, and preventing them from making the best use of their powers. Overwork is equally undesirable in a moral and an industrial point of view. Adam Smith has truly said that 'the man who works so moderately as to be able to work constantly, not only preserves his health the longest, but, in the course of the year, executes the greatest quantity of work.' On the other hand, much listlessness and idleness may be seen in the workshop. I look forward to a time, when there may be more continued attention to business during the working hours, and when the workman shall receive a proportionate reward in shorter hours of labour.

As the number of hours in the working day gives no accurate measure of the amount of work accomplished, so the rate of wages affords no indication of the actual

cost of labour. Cases have been recently quoted of English workmen on the railways in France earning double the pay awarded to the French labourer, and yet executing for the employer a greater amount of work, in proportion to the wages they received, than the native workman. It must, however, be remembered that this remarkable result was due to the superior physical energy and skill of the English navvy as compared with the French agricultural labourer. If the English artisan receives higher wages than the foreigner, he must, like the navvies in France a quarter of a century ago, in the earlier days of railway enterprise, earn his higher wages by a corresponding superiority in energy and skill. In railway experience it has been repeatedly proved that an increase in the rate of wages will often produce a more favourable result to the employer than the lower rate. Indeed, in a rude climate, the power of the manual labourer cannot be fully developed, unless he is supplied with a more generous diet than that upon which the agricultural labourers in some parts of the country support themselves.

The success, which marked my father's career, has become matter of notoriety. I venture to assert that no employer ever dealt more liberally with labour. The almost invariable result of the commencement of railway operations in any county in England, or in any country abroad, was a rise in the prevalent rate of wages. On one occasion an estimate was submitted to my father for a contract, for which a sharp competition was expected. The prices had accordingly

been cut down to an unusually low figure. It was thereupon asked how it was proposed to carry out the work for such inadequate prices. In reply it was stated that the calculation was based on the assumption that a reduction of wages could be negotiated. On receiving this explanation my father desisted from all further examination of the estimate, saying that if business could only be obtained by screwing down wages he would rather be without it. A similar feeling I believe to be generally entertained by employers. The reduction of wages is the form of economy to which they only have recourse in the last resort. The dearness of labour in England has stimulated inventive genius and administrative skill, and the continued success of our trade should be attributed, not only to the energy of the British workman, but to those improvements in the processes of manufacture, the merit of which should be equitably apportioned among our men of science, our scientific employers of labour, and those skilful workmen, not few in number, who have exercised their ingenuity with success in perfecting or abridging the tasks in which they have been engaged.

While the comparative cheapness of fuel and the abundant supply of iron and other raw materials of industry have been an immense advantage both to capital and labour in England, it must be acknowledged that, in economy of production no less than in design, foreign competition treads closely on our heels. It is, therefore, necessary to keep a watchful eye on all that is taking place abroad. It has always seemed to

me that the organisation of trades unions should be utilised for this important purpose. The resources of a joint purse should afford the means of sending delegates abroad, for whom opportunities ought to be provided of studying foreign languages, and whose duty it should be to keep the artisans of England closely informed of the fluctuations in trade and in the reward of labour. Though trades unions cannot in the long run materially influence the rate of wages, there are many valuable functions which they can perform; and I know of no more essential service which a trades union could render to its members, than the frequent publication of faithful reports on the labour question from well-placed observers on the Continent. English workmen only imperfectly realise the serious odds against which our industrial establishments have to contend, from the difference in the rate of wages in this country and on the Continent. It requires much skill in the employer, much energy in the workman, to compensate for the difference in the wages. Perhaps the most successful engineering establishment on the Continent is M. Krupp's at Essen. Between 8,000 and 10,000 men are employed. Day workmen and helpers receive only 1*s.* 2½*d.* to 1*s.* 9½*d.* a day, while the wages of smiths, puddlers, carpenters, and masons average 2*l.* 8*s.* to 6*l.* 15*s.* a month. These wages would not satisfy the English artisan, yet they are the highest which are paid in any part of Germany. This low rate of wages is to be explained partly by the cheapness of provisions; and here let me remind you that the comparative cheapness of provisions abroad goes a long

way to compensate foreign competitors for the higher price of coal and iron. Moreover, the mode of living adopted by the artisans in Germany is more frugal than English habits will permit. A writer in the August number of the *Revue des Deux Mondes* states that at Essen 1,500 of the workmen live together in a barrack, where they have an eating room in common. In this barrack the workmen can procure food and lodging for the small sum of 10*d.* a day. The writer proceeds to state that the favourite beverage of the workmen at Essen is coffee, and suggests that their preference for a cup 'which cheers, but not inebriates' to intoxicating liquors is worthy of imitation in other countries. In spite of the development of industry in this country, the constantly increasing employment, and gradual increase in the rate of wages, we have to deplore the existence side by side with this prosperity of a miserable and, we are too apt to think, inevitable pauperism. Do not the statistics of the consumption of intoxicating liquors, the expenditure of 100,000,000*l.* a year on drink, indicate an excessive indulgence in the use of stimulants?

In England the facilities of communication, which railways have afforded, have had a marked effect in equalising the cost of labour throughout the country. The difference in the rates of pay of the operatives employed in shipbuilding on the Thames, the Mersey, the Tyne, and the Clyde, has diminished, and will continue to diminish. Inequalities in the cost of living tend to disappear, and differences in the rental of land, according as the available area is large or small, and in the

cost of materials, will be the only elements of cost in which equality will be impossible. That which has already occurred in England will be repeated over a wider area. If wages in England, taking into account the amount of labour performed for the money paid, and the cost of living, give to the English artisan a great advantage over the foreigner, foreign labour will be attracted to the English workshop. On the other hand, the cost of the voyage to the United States has been so materially reduced that the higher rates of pay which the workman receives on the other side of the Atlantic, cannot but affect the price of labour here. The cost of living has increased so much, since the war between the North and South, that it is doubtful whether the married workman has derived any advantage from the increase in his wages. Should his position become much improved by a reduction in the cost of living, without a corresponding reduction in his wages, a large number of our skilled operatives will be attracted to a field of labour where employment is to be obtained on better terms. This has occurred, in point of fact, in South Wales, where reductions of wages have had the effect of increasing the emigration of miners to America. With a more easy means of communication, a more perfect solidarity must gradually be established between the industrial classes throughout the civilised world. The international combinations of the operatives may do something to check the influx of foreign labour into England. But they can only effect that object by giving an additional impetus to the ascending movement, of late years much more

rapid on the Continent than with us, in the scale of wages. It is almost superfluous to remark that the rise of wages on the Continent will be an advantage to British industry, by making the competition with the Continental manufacturer more equal than before.

Allusion has been made to the importance of a knowledge of the markets and of the state of trade to the industrial classes; and it has been suggested that the course of business should be carefully watched. A still more effectual means of obtaining this knowledge would doubtless be an inspection of the employer's books. This inspection is permitted in Messrs. Briggs's co-operative colliery. Theirs is a noble experiment which merits a full measure of success. It is clear, however, that such an arrangement as that experimentally adopted by Messrs. Briggs could not in practice be extensively applied. In many branches of trade the returns are in the highest degree fluctuating. A cycle of years of extreme depression is followed by a period of corresponding prosperity. During the years of bad trade workmen are employed at rates of wages which involve considerable loss to the employer, who looks for his compensation to the good years of large profits. If the workmen were continually informed of the profits of their employers, they would be apt to exact their full share of reward in the good years. They might not be equally ready to submit to sacrifices in the succession of years of bad trade. So in the case of the peculiarly hazardous business of a railway contractor. In some of his contracts the profits will be

large, in others the loss will be of serious amount. The large employer, taking a general view of his affairs, and setting the good contracts against the bad, contents himself if the general result is satisfactory. Is it likely that the navvy, who works equally hard both on the bad contracts and the good, would be content to suffer a reduction of pay on the bad contract, and to see his fellow-workman, employed elsewhere, but working no harder, receive double the pay awarded to himself? Is it not, on the contrary, certain, that while the navvy upon the unsuccessful contract would object to such a reduction of pay as would protect the employer from loss, the navvy employed on the more remunerative undertaking, if he were made aware of the profits, would press with urgency for some share in the gains of his employer, in the form of an increase in his pay? Such being the practical difficulties in the way of opening the ledger of the capitalist to the inspection of the operative, what other means are available for enabling the workman to determine the fair rate of wages, in his own branch of business? The political economy of the wages question, and the general principles which determine the rate of wages, are simple enough. The difficulties, which beset the question, lie entirely in the practical application of the principles to the facts. The facts are, unhappily, unknown to the working men. They have to struggle in the dark, and have no means of estimating correctly the profits of their employers. The last great strike in the coal trade in Lancashire occurred during the depression caused by a financial

panic. The consumption of coal had been much reduced. Foundries and engineering works received no orders; because the railways, with a few exceptions, were in a state of collapse. The loss of employment, and the mildness of the winter, had especially told on the consumption of coal in the metropolis, where vast stocks had accumulated. It was therefore to the interest of the coal-owners to cease for a time to raise coal from their mines. They, however, thought it more just to the miners in their employ, to propose a reduction of 10 per cent. in their wages. The reduced wage was peremptorily refused, and the men went out on strike. A resolution more favourable to the interests of their employers could not have been formed. I was present on the scene as a disinterested spectator. Mr. Mundella, who has won an honourable name by his humane labours, was anxious to be the messenger of peace. Unhappily his endeavours to mediate were unsuccessful, and the workmen continued the strike until their resources were exhausted. It is precisely in such a case as this that the co-operative associations, working side by side with private enterprise, would diffuse among the workmen in the trade a knowledge of the state of affairs, which would make such a mistake as that committed at Wigan impossible.

Co-operation would teach our industrial population to appreciate the difficulties and hazards attending the investment of capital in business. I have had an opportunity of seeing what they are. I can assure the working man, whose stock in trade is secure amid all

the fluctuations of commercial life, because it consists of his individual experience and dexterity, of which no reverse of fortune can deprive him, that the more precarious tenure by which capital is held—capital which has only been amassed after long years of thrift and untiring exertion—ought to mitigate the envy which the rare instances of great success in commercial enterprise may arouse. In the difficult vocation of a railway contractor the fluctuation and anxieties of which I speak are felt with peculiar severity. I know of one great contract, in which three partners together lost 750,000*l.* I could enumerate other contracts, in which, though the actual loss was not so serious, the result was even more disastrous in proportion to the limited extent of the operations. I am aware of the superior efficacy of individual to corporate enterprise. A considerable capital is necessary, in order that every mechanical improvement may be adopted. Again, the *skill required* to manage a large establishment cannot be obtained without paying high salaries; and workmen may sometimes find it difficult to obtain the necessary commercial faculty and experience either in a committee of management, or in an individual manager of their own class. Some may object to give to a fellow-workman, for his services as manager, a salary proportionate to the weight of responsibility which rests upon him. Admitting the difficulties to be considerable, they are not insurmountable. In Germany, in Sweden, in France, in the United States, a considerable development of the co-operative principle has taken place. In Lancashire, as I noticed on

the occasion of a recent visit, the improvement in the cotton trade has had the accustomed effect of encouraging the erection of new cotton mills. At Middleton, which was the point of observation which I happened to occupy, most of the new mills were established on the co-operative system. The same system is applicable to ship-building; and I hear it has already been brought into operation in a large engineering establishment on the Tyne, purchased on advantageous terms during the recent strike.

The diffusion of education under the recent Act will, doubtless, assist the industrial classes to overcome the difficulties of co-operative organisation; and, when a higher scale of education is given to the people than the purely elementary instruction which is now proposed, the great quality of self-help will be more highly developed. Under the Austrian Education Act of 1870, the necessity of compulsory attendance is accepted, and in addition to the bare elements of knowledge which are to be taught in England, the educational course comprises the history and geography of the child's native country, physical science, geometry, and singing. Religious instruction is entrusted in the first instance to the communion to which the parents belong. If the religious bodies neglect their duty, it is undertaken by the State. With such an example before them, our people will not long rest content with the present scheme, and will expect a higher education than the State as yet has provided.

In times of commercial depression, the importance of establishing friendly means of adjusting the rival

claims of capital and labour is underrated. When the rapid increase of production is checked, and more when the rate of production is diminished, the competition among the industrial classes for employment makes it impossible for labour, however skilfully organised, to exact any concessions from capital. It often happens, in periods of unsuccessful trade, that mills are kept running, mines are being worked, and that engineering establishments are in operation, although the results may involve the employer in serious loss. In such cases production is continued, partly for the sake of sparing to the workmen the suffering arising from suspension of industry, partly also with the hope of a return of better trade. But it will be readily understood that, under such adverse circumstances, the employers cannot possibly entertain demands for an augmentation of wages. The case is reversed in periods of commercial prosperity, when an increasing production in every branch of industry affords employment to every individual who is able to work. The competition of unemployed labour is no longer felt, and labour will naturally begin to seek for an increased reward. The certainty that these claims will arise is a strong reason why some effort should be made to establish friendly and impartial tribunals, by which they can be reviewed. Education will probably do much to develop the usefulness of courts of conciliation. It may be, as the *Economist* says, that a court of conciliation can never adjust a real quarrel. But it is certain that it may do much to prevent a quarrel from arising. If the workmen were

satisfied that an employer could not make a concession without suffering serious loss, they would not stand out for impossible conditions. The constant meeting of employers and representatives of the operatives at the same table must naturally facilitate peaceful negotiation, where a desire for peace exists on both sides. With constant discussion, coming events will cast their shadow before, and disputes are not likely suddenly to arise. Again, employers will acquire the habit of giving more unreserved explanations as to the condition and prospects of trade.

It seems to me that in England we should do well to study the state of society in Switzerland, as described by Mr. Bonar. In Switzerland the personal relations between employers and employed are far more intimate and cordial than with us. Persons of every grade of society sit side by side in the cafés and places of amusement. The admission of workmen into the communal councils, where they share with their employers the responsibilities and honours of public life, while it encourages a wholesome spirit of independence, does much to establish a mutual feeling of sympathy and regard. Sometimes a want of cordiality in the demeanour of the employer is misinterpreted, as indicating a want of sympathy and kindness of heart. A little more facility of manner towards faithful and deserving workmen would often encourage sentiments of loyal goodwill beneficial alike to the master and the man. When I had the privilege of accompanying my lamented father on visits of inspection to works under construc-

tion, I was ever deeply impressed by his genial manner towards his old followers. He used to recognise many of the old navvies, even some whom he had not met for years, and address them by their Christian names. He would never omit to shake hands cordially with old gangers and sub-contractors, and when he met them on the works he would generally pull up for a few minutes to talk over old times, and ask after mutual acquaintances who had been employed on former contracts. A small manifestation of kindness—how little it costs; how much it is valued! In conclusion, let me congratulate the workmen of Newcastle on their generally well-regulated conduct in the trying ordeal through which they have lately passed. It is by meritorious self-restraint, by urging with moderation and fairness demands which they deem to be just, that the claims of the operatives on the sympathy of all classes of society can alone be established. Believe me, your recent conduct has won for you many friends; and the ability which has marked the conduct of your leader, Mr. Burnett, will increase the desire already universally entertained to see labour more directly represented in the House of Commons. I for one do not want to see working men in that House as the exponents of new constitutional doctrines. There may be an ideal perfection in a republic; but under the limited monarchy, under which it is our happiness to live, we possess every substantial guarantee for freedom. Working men waste their powers when they aspire to become the leaders of political revolution; but no

patron of the working classes, however well meaning or friendly he may be, can urge their claims and explain their wants to the legislature and the country like one of themselves; and the working man may rest assured that a well-selected champion of his order will never speak in the House of Commons to an indifferent, an inattentive, or an unsympathetic audience.

LECTURE III.

WAGES IN 1873.

ADDRESS READ BEFORE THE SOCIAL SCIENCE ASSOCIATION, AT NORWICH, OCTOBER 1873.

IN the following Address I shall devote myself to the task of reviewing, I hope in an impartial spirit, the most recent phases of the labour movement. The great advance of wages is a conspicuous feature of modern English industry, and is obviously due to the rapid growth of the general trade of the country. The long depression following on the panic of 1866 has been succeeded by a period of unprecedented activity in every branch of our export trade. The demands upon the labour market have far exceeded the supply; and the artisan and labourer have not been slow to take advantage of a situation which afforded to them a brilliant opportunity. Between 1866 and 1869, the value of the exports of the produce and manufactures of the United Kingdom had remained stationary; while it rose from 190,000,000*l.* in 1869, to 256,257,000*l.* in 1872. Such a leap was not possible, without imposing a strain upon the powers of our labouring population, which must inevitably have led to a material alteration in the rate of wages.

It is often alleged that the recent advance of wages is attributable to a series of successful strikes. It can, however, be shown, that a strike against a falling market is never successful, and that trades unions, as an organisation for the purpose of raising wages, can rarely do more than assist the workman to obtain an advance at a somewhat earlier date than that at which the competition among employers would have brought about the same result. I may quote the unfortunate strike in South Wales, at the commencement of this year, as a signal instance of the inability of trades unions to cope with the superior resources of employers, when firmly united together.

It may be worth while briefly to recapitulate the most important incidents of the South Wales strike. In June 1872, the miners had proposed to apply for an advance of 20 per cent. on their wages. They were, however, advised by the executive council of their Union to limit their demand to an advance of 10 per cent. The advance was granted, and three months later the men asked for an additional 10 per cent. Their application was refused, and shortly afterwards the masters gave notice of a 10 per cent. reduction. The men thereupon desired that their case should be referred to arbitration. This request was refused by the masters, who were so fully convinced of the strength of their own case, that they offered to submit their books for the inspection of the workmen. The miners were unwilling to avail themselves of this offer; and, encouraged by large promises of support from Mr. Halliday and Mr. Pickard, they went out on strike.

Without venturing to apportion to either of the contending interests their precise share of responsibility, it is clear that the ironmasters were alone in a position to know whether their business was sufficiently remunerative to make it possible to dispense with a reduction of wages; and it was stated by Mr. Crawshay that he had taken a contract for 2,000 tons of rails at 9*l.* 2*s.* 5*d.* per ton nett, and that he lost money by selling rails at that price. Mr. Crawshay expressed an opinion, founded on the statements made by his workmen in daily interviews, that, but for the interference of the Union, they would have been satisfied with the explanations which he had given them, and returned to their work. In short, it became a point of honour with the masters to prove to their workmen that they were able, when acting in concert, to fight a successful campaign against the united forces of the Miners' Union.

The miners, on the other hand, were in the embarrassing position in which workmen are always placed whenever they are engaged in similar disputes. They had to struggle in the dark, without any independent information as to the profits realised by their employers. The responsibility of the Executive Council of the Miners' Union, during the labour crisis in South Wales, was immense. Although the miners connected with the Union were only 10,000 in number, by their cessation of labour, 50,000 of their fellow-workmen, engaged in various branches of the iron trade, were kept out of work. The 'strike pay' distributed by the Colliers' Union amounted to a total of 40,000*l.*, a sum quite insignificant, by comparison with the amount of 800,000*l.*,

which the men would have earned, had they continued at work; and yet the burden of sustaining a vast population proved eventually insupportable. In point of fact, the men were only enabled to continue the struggle by the assistance of the tradesmen of the district; and when, at length, the latter found themselves unable to continue the supply of the necessaries of life on credit, surrender was inevitable.

The reaction against the International Society among the working classes in Belgium originated in a similar cause. In 1871, during the strike in Flanders, the International was unable to fulfil its promises of support, and it has consequently lost credit with the operatives, many of whom, as we are informed by Mr. Kennedy, have withdrawn from the Society. It was the same with the miners at Waldenburgh, in Silesia, where 6,000 men went out on strike. After all their savings had been exhausted, they received a grandiloquent despatch from the *Central Council* at Berlin, urging them to emigrate *en masse*. A few obeyed the advice. The majority who remained were compelled to surrender, being consoled by the assurance that the most valiant armies must sometimes yield to superior numbers, and that they had won for themselves the admiration of Germany.

Almost to the last the originators of the strike in South Wales opposed the generally felt desire to return to work. Never, perhaps, was the magical power of eloquence over an imperfectly educated audience more conspicuously displayed than at the meetings, held by the workmen, towards the close of the South Wales

strike. Men, who had gathered together, for the express purpose of negotiating a peace with their employers, were turned aside against their own judgments by the eloquent exaggerations of orators, who were interested in the continuation of the struggle.

Overwhelming, indeed, is the influence of speech over the uninstructed mind. Well may Carlyle exclaim: 'He who well considers, will find this same right of speech, as we moderns have it, to be a truly astonishing product of ages; and the longer he considers it, the more astonishing and alarming. I reckon it the saddest of all the curses that now lie heavy on us.'

In the event, as I have said, the workmen returned to their work on the terms which their masters had originally proposed. Happily they had not long to wait for an improvement of their position; and, in less than a fortnight after the close of the strike, the workmen received an advance of 10 per cent. on the reduced wages which they had accepted.

The defeat of the miners in South Wales offers, as I have already said, one more illustration of the inability of workmen to force a concession from employers possessed of abundant resources, when the state of trade is such, that a concession cannot be made without involving the employer in direct pecuniary loss. We have evidence that this fact is becoming generally recognised. The inability of trades unions to control the rate of wages was frankly admitted by the members of the International Society in their last congress, when the working men were informed that hereafter, if they

wished to secure any substantial advantages for labour, there must be a strike, *en masse*, of all the working men of every country in the world.

While I feel bound to assure the working man of the certain frustration of his expectations, if he seeks to obtain from capital impossible concessions, I am at the same time ready to acknowledge that a strike will sometimes make an impression on employers, even in cases in which the demand for an increase of wages is not immediately conceded. If the trade, in which the workmen on strike are engaged, is prosperous for the employer, cessation of production means loss of profit. The apprehension of a recurrence of such loss may, on a future occasion, induce concessions; though the wage-earning classes may rest assured that, in the long run, and without the assistance of trades unions and the disastrous interruptions to their business occasioned by protracted strikes, the competition among employers, to secure the services of workmen, will infallibly lead to a rise of pay, proportionate to the amount of profit, derived from the particular industry with which they are connected. It was a noteworthy feature in the South Wales strike, that the men never had recourse to physical violence. I attribute their good conduct in this regard in part to the influence of Mr. Halliday and his colleagues.

I now pass to the graver subject of the recent rise in the price of coal. It will be remembered that, on the motion of Mr. Mundella, a Committee of the House of Commons was appointed in the last Session to inquire into this subject. After a long investigation the Com-

mittee reported, as might have been expected, that, in their judgment, the rapid development of the iron industry was the primary cause of the advance in the price of coal. It appears from statistics, compiled under the direction of the Committee, that the total production of coal in 1869 was 107,000,000 tons, of which 79,000,000 were used in manufactures. The total production in 1871 was 117,000,000 tons, of which 85,000,000 were used in manufactures. It will thus be seen how large a proportion of the total quantity of coal raised is consumed in manufactures, and specially in the manufacture of iron. In 1867, 567,000 tons of pig iron were exported, 4,193,000 tons of pig iron were converted into rolled iron, 1,317,000 tons of rolled iron were exported, and 28,331,000 tons of coal were used in the manufacture of iron. In 1872, 1,333,000 tons of pig iron were exported, 5,390,000 tons of pig iron were converted into rolled iron, 2,055,000 tons of rolled iron were exported, and 38,229,000 tons of coal were consumed in the manufacture of iron.

In the evidence, which he gave before the Committee, Mr. Lowthian Bell stated that the greatly increased demand for the manufacture of iron, although not the sole cause, was one of the causes, of the rapid advance in the price of coal.

In his district the iron trade gave a great stimulus to the coal trade. 'But,' he observed, 'all industry throughout the country has been, and still is, in a very flourishing condition. The manufacture of alkali in the North, the increase of railways, the substitution of steam for sailing vessels, all added to demands on an

output not very greatly increasing.' It is to be observed that the rise in the price of iron preceded the rise in the price of coal. Mr. Lowthian Bell quoted figures, from which it appeared that, in September 1871, forge pig iron was selling for 50*s*., while coke was selling for from 10*s*. to 12*s*. a ton. In July 1872, the forge pig iron rose to 120*s*.—more than double the price of nine months before—and coke, following the advance in iron, rose from 37*s*. 6*d*. to 41*s*. a ton.

The Committee rightly observe, in commenting upon these figures, that, although the disturbance in the proportion between the demand and the supply of coal might not appear sufficient to explain fully the great rise of prices, yet a comparatively small deficiency in the supply of an article of paramount necessity may produce a disproportionate increase of price, through the eagerness of buyers competing with each other, each for his own supply.

Other reasons for the rise in the price of coal have been urged, and among these more especially the reduction in the hours of labour, and the great advance of wages. The advance in the wages paid to miners is in truth extraordinary. In a large colliery, in which I have an interest, I will give the advance in the weekly wages of some of the principal trades. The weekly wages of hewers in 1869 were 24*s*. 5*d*.; they have risen in 1873 to 48*s*. 9*d*. The wages of timbermen in 1863 were 25*s*.; in 1873 they are 53*s*. 4*d*. Haulers, in 1869, 20*s*.; in 1873, 31*s*. 6*d*. Landers, in 1869, 21*s*.; in 1873, 36*s*. 9*d*. Labourers in 1869, 15*s*.; in 1873, 24*s*. a week. The average wages of all the men em-

ployed were 20*s.* 11*d.* for 1869, as compared with an average of 36*s.* 8*d.* per week in 1873.

A similar rise of wages has been established in other parts of the country, of which I have no personal knowledge. Wages have risen, since 1870, 48 per cent. in Northumberland, and 50 per cent. in Durham. The requirements of the Mines Regulation Act have involved an additional expenditure, estimated by some authorities at 12½ per cent. upon the cost of production. It was estimated by Mr. Pease that the total cost of working, in the collieries with which he was connected, had increased 50 per cent. between 1870 and 1872. Mr. A. Macdonald, the president of the Miners' National Association, confirming the opinion of Mr. Pease, estimated that the cost of getting coal in Northumberland had increased, between 1868 and 1872–73, from 60 to 65 per cent., while the selling price had risen 120 per cent.

It might be easily made to appear that the rise of wages was the principal cause of the advance in coal. But the case would be imperfectly presented for examination, if the profit derived from the working of the pits were not taken into view. The colliery, to which I have already referred, had for years been worked at a serious loss—there being no dividend for the proprietors in the years 1870 and 1871. Indeed, the prospects were so gloomy in the latter year, that some of the shareholders in the undertaking made over their interest to their co-proprietors at a considerable discount. At length, however, the tide suddenly turned, and in 1872 an ample dividend was earned; while

there is every prospect that the results of the present year may be still more favourable.

My individual experience abundantly confirms the opinion expressed by the Committee of the House of Commons, to the effect that the prices of coal, which prevailed for years before the present rise commenced, were so low that they did not afford a reasonable profit to the owners of collieries in general, or such remuneration as the workmen might, having regard to the hazardous and arduous nature of their labour, reasonably expect. The rise in the rate of wages has not, under the exceptional circumstances, been unreasonable; and it is certain that the real order of events has been, first, the rise in price of iron, then a rise in the price of coal, and lastly a rise in the rate of wages. On the other hand, great as the profits in the coal trade have been, it is a question whether the last two years have compensated the coal-owners for the former protracted era of stagnation, and, in many cases, of serious loss.

In a letter addressed to *The Times*, early in the present year, in which the case of the masters was ably argued, Mr. Laing narrated the history of the Bleanavon Company. Owing to various causes, that concern had been worked for several years without profit. Only within the last three years had it become a profitable undertaking; and yet all through a long period of adversity an amount of 3,000*l.* to 4,000*l.* a week was paid in wages, at the same rate as by the most prosperous iron works; and the capital sunk by the original proprietors was the means of creating a

town, and supporting a population of 9,000, in a secluded mountain valley of South Wales.

While the present unprecedented prosperity may continue for a year or two years at the most, yet in process of time, the influx of capital into the coal trade, attracted by the present high profits, will infallibly lead to some reduction of price. New coal pits are being sunk. Old pits are being improved. More workmen are being trained in the business of mining. Hence we may look with confidence to an augmentation of the output, and to a sufficient supply for the ordinary demands of consumers. The insufficient profits of former days cannot be attributed to the unreasonable standard at which wages were maintained. The excessive competition in the supply of coal was the true cause of the unfortunate position of the trade. And as in the former period of depression, so in the sudden, and it may be short-lived, prosperity of the present day, the rates of wages must be regarded, not as a cause, but as a consequence, of an abnormal position of affairs.

Complaints have been urged as to the effects of shortening the hours of labour; and it is certain that, if a comparison be made between the amount raised and the total number of individuals employed, a less quantity is raised than in former years. It must not, however, be forgotten that high wages have attracted many untrained hands to the coal pits. It would be presumptuous in me to express an opinion as to the precise number of hours which would constitute a fair working day in a coal pit. Mr. Macdonald, who has

had actual experience as a working miner, declares that the present earnings could not be obtained with less than eight hours of work a day, and that no man who laboured assiduously for that number of hours could work continuously six days a week at coal-mining. It will be the duty of those, to whom the miners are in the habit of looking for guidance, to watch with care the course of trade. They know that the iron manufactures of this country can only prosper, so long as we are able to sell our iron abroad at cheaper rates than those demanded by foreign producers.

There are some who think that a limitation of the hours of labour is in itself an evil. I cannot share in this view. Because some may make an unwise use of their newly acquired advantages, that is no reason for returning to a former state of things, when, in the general depression of trade, an undue pressure was brought to bear upon the working man. 'No doubt,' says Sir Arthur Helps, 'hard work is a great police agent. If everybody were worked from morning till night, and then carefully locked up, the register of crime might be greatly diminished. But what would become of human nature? Where would be the room for growth in such a system of things?'

The use of leisure requires education, and that education was not imparted to the mechanics, miners, and puddlers of former generations.

Among the various proposals for maintaining the production of collieries, while conceding to the individual workman the advantage of a reduction in the number of hours of daily labour, the double-shift

system of working promises a most satisfactory result. When the memorable struggle was commenced in Newcastle for a reduction in the number of hours, I ventured to suggest, in an address delivered at Birkenhead, that the solution of the difficulty which had arisen in the engineering establishments, might be found in employing relays of mechanics to succeed each other at the same machine. My friend Mr. (now Sir George) Elliott, is pushing the system of a succession of labour in collieries, with very advantageous results to all parties concerned. Comparing a Durham colliery, worked on the double-shift system, with a colliery in Glamorganshire, worked by one set of miners, he ascertained that twice the quantity of coal per day was being raised in Durham. The prejudices of the miners in South Wales against the double-shift have presented a serious obstacle to its introduction. Mr. Elliott hopes that this may eventually be overcome by the influence of Mr. Macdonald and other representatives of the men, whose superior intelligence will enable them to appreciate more readily the advantages of new and improved systems of working.

Among various improvements, which may tend to reduce the price of coal, we may look with confidence to the increased use of coal-cutting machinery as a substitute for manual labour, and to the discovery of methods by which the consumption of fuel may be reduced. The experiments, which have been tried with the machines invented by Captain Beaumont, R.E., and others, have been eminently satisfactory; and these machines are now being made in large numbers in Glasgow and Birmingham.

Our domestic consumption is undoubtedly wasteful; and the inventor of an effective improvement in the form of grate in common use will be a real benefactor to his fellow-man. Already we have, in the cooking-stove for yachts, the invention of Mr. Atkey, of Cowes, a highly successful apparatus. A letter from Mr. Vale, ex-President of the Liverpool Architectural Society, addressed to *The Times* in August last, describes a cooking stove for a party of nine persons and a crew of thirteen men, which measured only one foot four inches by one foot four inches in area, and one foot nine inches in height, the actual fuel-space being less than one cubic foot. The fuel required in his yacht for one day's consumption was forty-seven pounds of coke at twenty shillings a ton, and the cost per head per day amounted to less than one farthing.

In his lecture, delivered at Bradford during the meeting of the British Association in the present year, Mr. Siemens described Captain Galton's ventilating fireplace as a most valuable invention.

'The chief novelty and merit,' he said, 'of Captain Galton's fireplace consists in providing a chamber at the back of the grate, into which air passes directly from without, becomes moderately heated (to 84° Fah.), and, rising in a separate flue, is injected into the room under the ceiling with a force due to the heated ascending flue. A plenum of pressure is thus established within the room whereby indraughts through doors and windows are avoided, and the air is continually renewed by passing away through the fireplace chimney as usual. Thus the cheerfulness of an open fire, the comfort of a

room filled with fresh but moderately warmed air, and great economy of fuel, are happily combined with unquestionable efficiency and simplicity; and yet this grate is little used, although it has been fully described in papers communicated by Captain Galton, and in an elaborate report made by General Morin, le Directeur du Conservatoire des Arts et Métiers of Paris, which has also appeared in the English language.'

Economy in the use of coal for the manufacture of iron is a far larger question than economy, however desirable in itself, in the consumption for domestic purposes; and, as an illustration of what may be achieved in this direction, I will quote some extracts from a letter from Mr. Bessemer, detailing the results which have actually been attained through his most valuable discoveries.

The average quantity of coal required to make a ton of pig iron is about two tons of coal to a ton of pig; and as pig iron forms the raw material for the several processes of manufacturing both malleable iron and steel, we may treat the pig simply as the raw material employed, and consider only how much coal is required to make a ton of finished rails. About two tons of coal are required in order to convert pig iron into iron railway bars.

To produce one ton of steel rails by the old process of making steel in Sheffield, a total consumption of ten tons eight cwt. of coal is required; and the conversion of iron bars into blistered bars occupies from eighteen to twenty days.

To make Bessemer's steel from pig iron into steel

rails requires about five cwt. of small coal, in the form of coke, to melt the pig iron in the cupola; two cwt. to heat the converting vessel and ladle; two cwt. for the blast engine, which converts five tons of pig iron into fluid cast steel in twenty minutes; and, lastly, for rolling the ingots into rails, sixteen cwt. of coal, making a total consumption of twenty-five cwt. of coal, in producing one ton of Bessemer's steel rails from pig iron. Thus, common iron rails take two tons of coal; Sheffield cast steel rails, ten tons eight cwt.; Bessemer's steel rails, one ton five cwt.

But we must also consider other points in connection with these figures, in order to arrive at a correct estimate of the saving of coals, effected by the introduction of steel, as a substitute for iron.

Although the cost of Sheffield steel entirely shut it out of the market for rails, it must be borne in mind that it was extensively used for wheel tires, slide bars, piston rods, and other parts of locomotive engines; and here a saving of over nine tons of coal per ton of steel has been effected. Further, it must be borne in mind that at stations where rails are rapidly worn, the saving by the use of steel, as a substitute for iron, must not be simply estimated as a saving made on one ton of each material. For instance, at the London and North-Western station at Crewe, the iron rails are so rapidly worn, that they required to be reversed every four months, each rail being completely worn out in eight months. Bessemer's steel rails were first used at this station, and after being in constant use for seven years, they were removed in consequence of rebuilding the

station; one side only of the rail having been used, and this was not quite worn out. During the seven years, therefore, that those rails were down, one ton five cwt. only of coal had been employed in the production of each ton of rails used at this station; whereas ten sets of iron rails would have been entirely worn out in that period, each set consuming two tons of coals in its manufacture, or equal to twenty tons of coals for iron rails, as against one ton five cwt. of coals for steel rails; and these, when turned, would be equal to another seven years' wear on the side not used.

The above is, no doubt, an extreme case, but the same sort of thing goes on everywhere where steel is used, though in a lesser degree. It has indeed been admitted by competent persons, that the rapid destruction of iron rails would have caused a complete collapse of the Metropolitan railways by continued interference with the traffic, while removing the worn-out rails, had not steel been employed.

It should further be borne in mind that the extra strength of steel over iron admits of a reduction of one-third of its weight in all structures, previously made in iron. Thus, a further saving is effected in the fuel consumed for a given work.

The rapidity with which Bessemer's steel is coming into use will be appreciated, when it is stated that the report of the jury at the London International Exhibition showed that the entire production of steel in Great Britain, prior to Bessemer's invention, amounted to 51,000 tons per annum; while the quantity of Bessemer's steel made in Great Britain during the twelve

months ending June 1873 amounted to 481,000 tons, or nearly ten times the amount of production prior to the invention. Had this quantity of steel been made by the old Sheffield process, it would have consumed, according to the foregoing figures, 4,401,000 tons more coal than was actually employed in its production. Should this enormous increase in the manufacture continue in the ratio of the last five years, we may five years hence have treble the quantity of steel made in this country with a corresponding saving of fuel.

In steam vessels a remarkable economy of fuel has of late been attained. In his lecture at Bradford Mr. Siemens said: 'A striking illustration of what can be accomplished in a short space of time was brought to light by the Institute of Mechanical Engineers, over which I have at present the honour to preside. In holding their annual general meeting in Liverpool in 1863, they instituted a careful inquiry into the consumption of coal by the best engines in the Atlantic steam service, and the result showed that it fell in no case below $4\frac{1}{2}$ lbs. per indicated horse-power per hour. Last year they again assembled with the same object in view in Liverpool, and Mr. Bramwell produced a table showing that the average consumption by 17 good examples of compound expansive engines did not exceed $2\frac{1}{4}$ lbs. per indicated horse-power per hour. Mr. E. A. Cowper has proved a consumption as low as $1\frac{1}{2}$ lbs. per indicated horse-power per hour in a compound marine engine, constructed by him with an intermediate superheating vessel. Nor are we likely to stop long at this point of comparative perfection, for

in the early portion of my address I have endeavoured to prove that theoretical perfection would only be attained if an indicated horse-power were produced with $\frac{1}{5 \cdot 5}$ lb. of pure carbon, or say $\frac{1}{4}$ lb. of ordinary steam coal per hour.'

The furnace invented by the Messrs. Siemens is another highly successful contrivance. In melting one ton of steel in pots, 2½ tons of coke are ordinarily consumed. In Messrs. Siemens' furnace a ton of steel is melted with 12 cwt. of small coal.

When such results as this have been secured by a few inventors, what may we not venture to expect from the concentration of many ingenious minds on the important problem of economising coal?

It remains to consider how far the apprehensions, entertained in many quarters for the future of the British iron manufacture, are justified by actual experience. When we look back upon the past, the growth of British commerce cannot fail to reassure those who are most inclined to look doubtfully on the future of our industry. Some statistics of the increase in the exports of iron and steel were given in a recent number of *Iron*. Our exports of iron in 1840 amounted to 268,000 tons, of the value of 2,526,000*l*. The quantity in 1850 was 783,000 tons; in 1860, 1,442,000 tons; and in 1870, 2,716,000 tons. The value in the latter year amounted to 21,080,000*l*. In 1872 the quantity was 3,383,000 tons, of the value of 36,000,000*l*. We are sometimes assured that Belgium threatens our iron-masters with serious competition, but in Belgium the ore must be carried 100 miles or more to be smelted.

The coal-pits are worked in many cases with considerable difficulty, and a Belgian workman does little more than half what an Englishman can accomplish in the same space of time. Sometimes we are told we shall lose our position in the Russian market. The Russian Government are doing their utmost to encourage the manufacture of iron at home, though there is little demand for pig iron in that country. The Russians have had no experience in puddling. Skilled mill and forge men are scarce. Few of those obtainable have had any experience in the use of mineral fuel, and great difficulty is experienced in consequence of the objection of the Russians to piece-work. Lastly we are threatened with competition from the United States. The production of pig iron in the States may now be estimated at 2,500,000 tons, an increase of 1,000,000 tons on the production five years ago, and yet the ironmasters of the United States, who are protected by a duty of nearly 3*l.* a ton on railway iron, have hitherto been unable to supply the entire demand at home. There cannot be a doubt as to the ultimate consequences of the comparative exhaustion of our supplies of raw material at home; but we may hope that the tariffs, which now throw obstacles in the way of legitimate trade, will in time be removed, and that, as Mr. Mattieu Williams has suggested, we may be enabled to avail ourselves of the natural resources of America for obtaining our supplies of raw material, just as we already derive large supplies of hematite iron ore from Bilbao.

At the present time the United States, not content

with their natural advantages, impose an almost prohibitory tariff on our exportations. There is a party in America opposed to protection, but hitherto the superior organisation and greater determination of the manufacturers interested in the maintenance of the tariffs have overpowered all opposition. At the last annual meeting of the American Institute of Mining Engineers at Philadelphia, the Honourable D. Kelley, who delivered the opening address, asserted that, by its dereliction of duty in not protecting the labourer of Great Britain against competition, the Government of this country have fostered anarchy in Ireland, while the life of the labourer in England and Scotland has been robbed of all its joys. 'The millions of sturdy men,' he declared, 'represented by Bradlaugh, Odger, Joseph Arch, and the travelled and humane patrician, Sir Charles Dilke, know that the world owes every man a living, and that it is only by protection that the means of living can be secured to the people.' So long as such a feeling prevails there is little hope of our ironmasters obtaining free access to America.

The progress of the American iron works is the more creditable, because great difficulties are experienced in obtaining a sufficient supply of labour. Men come over from England, having had their expenses paid, on condition of taking an engagement for a period of five years. As soon as their bargain is performed, they generally find it impossible to resist the attractions of an independent farm in the Far West. Their places must be supplied by other workmen, obtained by the same costly means from the mother country. The

difficulty of obtaining skilled workmen has had a great effect in America in stimulating the invention of labour-saving machinery. As scientific manufacturers the American ironmasters can doubtless hold their own against the world. In finished iron the Americans have been highly successful. Bridge-work, locomotives, wheels and tires, and machinery, are produced at prices which may compare not unfavourably with our own. As an illustration of American ingenuity and enterprise, which came under my immediate notice on the occasion of a recent visit to the States, I may point to the Peabody Rifle Company's establishment at Providence, Rhode Island. During the Rebellion the Company was fully employed in the manufacture of small arms. The cessation of the struggle put an end to the demand for military weapons. With the fertility of resource which distinguishes American industry, the manual skill of a large body of workmen especially apt in the production of tools or machinery composed of numerous small and interchangeable parts, and the valuable and ingenious plant belonging to the Company, are now employed in the production of sewing machines. Three hundred machines are turned out every day, and the sale is constantly increasing. The wages of the 500 operatives employed are most liberal. The monthly pay-sheet amounts to 25,000 dollars, giving an average of 40*s.* a week throughout the factory. The leading workmen, five or six in number, to whom the work is let by the piece, or rather by sub-contract, earn nearly 600*l.* a year. The superior mechanics earn 12*s.* to 14*s.*, labourers 4*s.* to 6*s.* a day. The

supply of highly-skilled labour is limited, but ordinary mechanics can always be obtained. On an average, one skilled mechanic a day makes application for employment.

The success of the Peabody Company affords significant evidence that the cost of production is not augmented in equal proportion to the high rates of pay. At the time of my visit they were negotiating a contract for the supply of 100,000 rifles to the Roumanian Government, at the rate of 63*s.* per rifle; and they had to compete for the contract against all the makers of Birmingham and Liége. This Company had also in prospect an order for 200,000 rifles from the Turkish Government. The success, with which the Americans have reduced the cost of production by the invention of machinery, gives us ground for caution lest our old supremacy be shaken by the energy and talent of the New World, while it also gives us reason to hope that the effects of the exceptionally high rates of wages now prevailing may be mitigated by substituting, wherever it is possible, mechanical for manual labour.

Meanwhile there is nothing in the present condition of our trade to justify serious misgivings, as to our power of continuing a successful competition with foreign producers. It does not follow that, because we have lost a monopoly of a particular branch of trade abroad, the skill of the English workman must have deteriorated, or the cost of production have been unduly enhanced by the rise of wages. Foreign countries may have imported from us a particular commodity at a former time, solely because they were

inexperienced in the process of manufacture. When my father was executing the Rouen and Havre Railway he imported the rails from England, although he had to pay an import duty at the French custom-house, amounting to a considerably larger sum than the selling price of the rails at home. The former almost incredible difference between the price of English and French rails no longer exists; because that special branch of industry is now as well understood in France as in England. So, too, in the case of the employment of English contractors for the execution of public works on the Continent. An opportunity was offered to them in the origin of the railway system on the Continent; because in those early days of railways there were no native contractors sufficiently acquainted with the art of making railways to venture to compete with the English invaders. Their intelligent observation of our methods of construction soon enabled the contractors on the Continent to tender in competition with the English; and for many years past all the railway works in France have been carried out by Frenchmen. It does not follow that the English contractor has lost his former skill. The true inference is that the French, who had been previously in a position of inferiority solely from lack of experience, were enabled, as soon as they had gained that experience, to execute the works required, without the assistance of foreigners.

The development of our commercial relations with France, since the negotiation of the Treaty of Commerce, affords convincing proof of the great capabilities

of our manufacturing industry. Since 1860 the exportation of iron, wrought and unwrought, to France, has increased in value 540,000*l.*

Looking therefore to the present condition of our iron trade, there is nothing to justify serious misgivings. According to the last report of the Commissioners of Customs, the average value of the pig iron exported in 1870 was 2*l.* 19*s.* 2*d.* per ton; in 1871, 3*l.* 1*s.* 8*d.*; in 1872, 5*l.* 0*s.* 11*d.*; and yet the demand for pig iron continued unchecked. The increase in the quantity exported in 1872 over 1871 was 28 per cent. The increase in the price ranged as high as 108 per cent.

While the export of pig iron attained to the figures I have quoted, the total increase in the exports of iron and steel manufactures did not exceed 6·7 per cent. Indeed, the manufacture of steel actually fell off from a value of 683,000*l.* in 1871 to 623,000*l.* in 1872, a result the more remarkable as compared with the increase in pig iron, because the price of steel had not advanced in the same proportion as the rise in pig iron. The price of the latter article had risen, as I have said, from 3*l.* 1*s.* 8*d.* to 5*l.* 0*s.* 11*d.* per ton; while unwrought steel had only advanced from 30*l.* 12*s.* 3*d.* to 32*l.* 18*s.* 7*d.* per ton, and steel manufactures from 52*l.* 8*s.* 1*d.* to 55*l.* 4*s.* 10*d.* per ton.

Hence it would appear that a demand once created for an article of the first necessity, such as iron, is not easily checked, even by a very marked advance of price.

It must, however, be remembered that, when the course of trade has been changed, and consumers, alarmed by the high prices in our market, have been

taught to look for their supplies elsewhere, the position once lost is not easily recovered. The superiority of our artisans in skill and industry has assisted our manufacturers to compete successfully in the past. The same success will not be maintained in future, unless our employers and workmen continue, as before, to use their united efforts to reduce the cost of production.

Perhaps no branch of industry has been more successfully prosecuted in this country than shipbuilding; and the extensive use of iron for ships of the largest type makes it a point of great interest to ascertain how far the cost of building ships has been affected by the recent advance of wages. I am informed by an eminent firm of shipbuilders, that, at the close of 1871, shortly after the reduction in the hours of labour from fifty-nine or sixty hours a week to fifty-four, an agitation was commenced amongst all classes of men for an advance in their rates of wages, which has been, in some shape or other, conceded to them, to the extent of from 7½ to 15 per cent. In reality, this was the natural consequence of the reduction in the hours of labour; although at the outset the leaders of that movement professed that they had no desire to raise the rates of wages.

The reduced hours of labour increased the cost of production of all articles, and led to the necessity for an advance in the rates of wages. In point of fact, the advantage of the reduction in the hours of labour being conceded, on social and moral grounds, the necessity for some corresponding advance in wages followed as a matter of course, and was perhaps not unreasonable.

The two causes combined have resulted in an increased cost of production, so far as labour is concerned, of from 20 to 25 per cent. The cost of building first-class steamers and first-class marine engines has, in consequence of the rise in wages and materials, been increased from 30 to 40 per cent.

The actual diminution, by the nine hours' movement, in the amount of work turned out with a given plant should, in theory, be only in proportion to the reduced number of the hours of work, or, say, about one-tenth. It is in reality from 15 to 20 per cent.

From an eminent firm on the Clyde, I learn that on riveters' and smiths' piece-work there has been an increase of 20 per cent. and 10 per cent. respectively, in the last two years; on the other hand, in fitters' piece-work there has been a decrease of 10 per cent. The price of first-class steamers in 1871 was about 24*l.* per ton. At present the cost would be from 30 to 35 per cent. higher. While the building of sailing ships decreased in 1871 and 1872, in 1873 there has been an increase in the number built. The building of steamers has not been so brisk in 1873 as in 1871 or 1872, a marked falling-off in orders having taken place since the beginning of this year.

On the Thames I find that piece-work is at least 15 per cent. dearer now than in 1869 and 1870. The operatives, employed in attending to large self-acting machines, which require little manual labour, are only working fifty-four hours instead of sixty hours. Again, there has been a large increase of overtime, since the nine hours' movement commenced. Wages for over-

time are higher than for ordinary time. An hour and a half's pay is given for every hour's work, and many men refuse employment, unless a certain amount of overtime is given to them.

With these recent reports from shipbuilders it may be useful to compare the general progress of shipbuilding in the United Kingdom, in the last ten years. The tonnage of the ships built increased from 328,000 tons in 1867 to 475,000 tons in 1872. There has been no increase in the registered tonnage in the interval. The vast increase in the proportion of steam to sailing vessels will fully explain the apparently stationary condition of the mercantile marine, if tested solely by the amount of tonnage. It is equally reassuring to find that, in the estimation of foreigners best qualified to form an opinion, the extent of our merchant navy excites profound admiration. M. Bal, director of the Bureau Veritas, in giving evidence before the French Parliamentary Commission of inquiry into the condition of the French Mercantile Marine, said that to him it seemed almost incredible that England, which has only 27,000,000 inhabitants, had 6,903,000 tons of shipping, whereas all the other maritime Powers combined had only 6,648,000 tons.

In the United States, until the quite recent, and still but partial, revival of the trade, the decline of shipbuilding had been very remarkable. In a country possessed of fewer natural resources, the suffering, which would have been entailed on the particular industries, would have been almost insupportable. According to Mr. Wells, 15,000 men were employed in New York,

in 1860, in building and repairing marine steam-engines. In 1870, 700 found employment in the same branch of industry.

In France, it would seem, from the report of Mr. West, that a wooden ship costs from 3*l.* to 4*l.* a ton more than a similar ship built in England or Canada; and in regard to iron steamers, the price of wrought iron in France for shipbuilding purposes is so much higher than in England, as to make competition impossible.

Amid the many difficulties of the present time, English employers may perhaps take comfort by looking abroad, where they will generally find that the same problems with which they have to deal, are presenting themselves, and often in a still more aggravated form.

Passing from shipbuilding to engineering, I have ascertained that in an establishment on the largest scale, in which the cost of production has been reduced to the utmost, the expenditure was increased in 1871 over 1870, for wages, 2·73 per cent., and for materials, 2·59 per cent. Again, the increase in 1872 over 1871 was, for wages, 7·97, and for materials, 7·94 per cent., thus showing that the most liberal application of capital, the most ingenious machinery, and skilful administration, had failed to compensate for the great advance in the rate of wages.

I may also quote the following details from a report received from an engineering establishment, with which I am connected.

The average wages of some of the most important

trades in our employ in 1871, 1872, and 1873, were as follows :—

Trade	Year 1871		Year 1872		Year 1873	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*
Fitters	29	0	30	0	33	0
Turners	30	0	31	0	34	0
Planers	24	0	25	0	28	0
Slotters	24	0	25	0	28	0
Drillers	20	0	21	0	23	0
Moulders	34	0	34	0	36	0
Dressers	24	0	24	0	26	0
Coppersmiths	32	0	33	0	36	0
Smiths	31	0	32	0	35	0
Strikers	19	0	20	0	22	0
Patternmakers	31	0	33	0	36	0
Joiners	30	0	31	0	34	0
Carpenters	42	0	42	0	42	0
Painters	29	0	29	0	32	0
Platers (boilermakers)	34	0	34	0	36	0
Riveters „	28	0	30	0	32	0
Holders-up „	24	0	24	0	26	0
Platers (ship yard)	35	0	35	0	36	0
Riveters „	30	0	30	0	30	0
Holders-up „	23	0	23	0	24	0
Labourers	18	0	18	0	20	0

In reply to my inquiry, as to the effect of the nine hours' movement, I am informed that, while wages have considerably advanced, no increased activity on the part of the men has taken place. Indeed, less work is performed in an hour now than formerly, when ten hours constituted an ordinary day's work.

The rise of wages has been very considerable in the last two years. The price of locomotives has, in consequence of these various causes, increased from 25 to 30 per cent. An ordinary passenger engine, which might have been built in 1871 for 2,200*l.*, cost in 1872 2,400*l.*,

and in the present year the price would be 2,600*l.* In modern marine engines the cost of materials and labour is about equal. An engine, which might have been built in 1871, at 40*l.* per horse-power, would have cost in 1872 46*l.* In the present year the price has advanced from 55*l.* to 60*l.* per horse-power.

In one of the largest steel and iron works in the North I learn that the wages of skilled hands are now from ten to sixteen shillings a day, and have increased 25 per cent. since 1870.

Lastly, I am informed that there is no appreciable difference in the dress or appearance of the working man in the town in which my works are situated, that there is more money and more time spent in the public-house, and that time in the morning is not so well kept now as it was before the nine hours' movement commenced. It is suggested to me that the improvement in wages and the shortening of the time came too suddenly upon the working man.

It is sometimes difficult to overcome a feeling of depression as to the future of our mechanical industry. But, when we look to the progress made in the past, there is no ground for discouragement. The value of our exports of steam-engines in 1866 was 1,760,000*l.*, in 1872, 2,995,000*l.* The value of our exports of machinery of other sorts was, in 1866, 2,998,000*l.*; in 1872, 5,606,000*l.* The past has been prosperous, and there is no reason why a cloud should overshadow the future of our industry, if only the time-honoured rule be observed, of giving a fair day's work for a fair day's wages.

I now proceed to examine the situation of affairs among our Continental rivals. Valuable materials for such investigation are furnished to our hands by the recently-published reports of our Secretaries of Legation, and by a most important pamphlet prepared by Mr. Redgrave. From these authorities we learn that, in the last ten years, wages at Verviers, a great centre of industry in Belgium, have gradually increased by 20 per cent., and that the working hours are shorter than they were. At Ghent the rate of wages has risen 60 per cent. in the last fifteen years. The average prices of the necessaries of life show an increase in Belgium of 50 per cent. in the last thirty years. Beef and mutton are now 8*d.* per pound, and bread is about 8*d.* the four-pound loaf. The rise of wages has, however, been greater in proportion than the increase in the cost of lodging, clothes, and food.

In Prussia, Mr. Plunkett states that there is an universal tendency to reduce the hours of labour, and to raise the rate of wages. The Breslau Chamber of Commerce reports that, in consequence of the increased cost both of labour and raw material, the prices of cotton carded yarn had advanced 10 per cent. on the best and 16 per cent. on the ordinary qualities. In the Silesian cloth trade, in 1871, prices rose 15 per cent.

In the spinning and weaving factories in Silesia, according to Dr. G. Reichenheim, who is quoted by Mr. Plunkett, the increase in the rate of wages in the last ten years has been about 30 per cent. for female weavers, while in the case of male labour it is more than double. The same complaints are made, which

we hear in this country, as to the effect of higher pay in rendering the operatives less careful in their work, and more insubordinate than formerly.

The most recent inquiries tend to establish the fact, which I have, on former occasions, endeavoured to urge on the attention of employers, that underpaid labour is by no means the most economical. It does not follow that, when a workman receives more pay for exactly the same amount of labour, there is no increase in the cost of production. It would be absurd to put such an interpretation on the axiom assumed by my father, when estimating the cost of work, that the cost of labour in a fully peopled country was, as a general rule, the same, whatever might be the nominal rate of daily wages. But, where the principle of payment by the piece is adopted (and, trades union opposition notwithstanding, no other system of payment can be really equitable), there it will be found that labour, when stimulated by a liberal reward, is far more productive than that of the ill-paid operative. The reports to which I have referred are full of illustrations on this point.

In Belgium, all the manufacturers are of opinion that the English operatives are far superior to the Flemish. An Englishman, being better fed, possesses greater physical power, produces as much work in ten hours as a Fleming in twelve, and, understanding the machinery which he works, can point to the cause of an accident; whereas in Ghent half-an-hour is constantly lost in seeking for the reason of a stoppage. Although the rates of wages are lower, and the hours

of labour longer, English manufacturers have but little to fear from Belgian competition.

Mr. Egerton states that in Russia thirteen hours a day is the average length of the hours of labour, children generally working the same time as men; and yet there is no country in which there is so great a waste of labour. In mills where the best and newest machinery is used, it is necessary to limit the earnings, which, if large in amount, would be expended in drinking. In England a spinner will, with his assistants, attend to 2,000 spindles. In Russia, he rarely has 1,000, and generally only 500 spindles under his charge.

Mr. Gosling says of the Swiss workman, that he is inferior to the British workman in physical strength and energy.

The French manufacturers insist strongly on the greater cost of production in their country as compared with England. They estimate the cost of wages per week for the hands employed upon 10,000 spindles at 59*l.* 10*s.*, as compared with 41*l.*, which would be the corresponding amount in an English factory. 'The value of the English workman,' says Mr. Redgrave, 'still remains pre-eminent, although the interval between him and his competitors is not so great as it was; he has not retrograded, but they have advanced.' We see too much of intemperance in England, but there is much reason to complain in Belgium and the manufacturing districts of France, where the cheapness of intoxicating liquors is a fearful temptation to the working classes.

The progressive development in the skill of our

factory operatives has been clearly shown in the comparison, instituted by Messrs. Bridges and Holmes, of the tasks, now performed, with the amount of work allotted to the hands, as ascertained by the Factory Commission of 1833. Messrs. Bridges and Holmes estimate that the proportion of spindles in 1833 was 112 to each hand, while the corresponding number at the present day would be 517 spindles. The speed of the mule has been so much increased, that more stretches are now made in 10½ hours than formerly in twelve. In 1848 a female would have had only two looms, now she will attend to four. The speed of the power looms in 1833 varied between 90 and 112; it now varies between 170 and 200 picks a minute. Notwithstanding all the improvements of mechanism, the cotton-weaver of the present day is subject to a greater strain than his predecessor of forty years ago.

From a consideration of all these facts, we have reason to congratulate employers in England on the possession of a body of workmen superior to those of any other country. We may also assert, on their behalf, that in no other country of the Old World is the same solicitude displayed for the welfare of the workmen.

I observe with regret the frequently repeated manifestations of disaffection on the part of the working classes on the Continent towards their employers. Lord Brabazon, in his able report on the condition of the industrial classes in France, quotes some painful illustrations of the entire want of confidence between class and class in that distracted country, where 'Communistic principles have done so much to alienate the affections of

the workmen from their employers,' and where a large proportion of those engaged in manufacturing industry live in a condition of wretchedness and misery, of which, I venture to hope, very few of those who can command regular employment in this country, have any experience. At Elbœuf we are told of a certain manufacturer who, during the period of dearth, bought a large quantity of provisions, with a view of reselling them to his workmen at a low rate, but who was obliged to renounce his humane project; because the workpeople imagined it was a pretext for making money out of their misery. At Lyons, where no social distinctions keep asunder the numerous small employers from the employed, the sympathy, which formerly existed between the owner of the loom and his assistants is no longer found.

It is a great satisfaction to turn from this gloomy picture to those bright recollections, the most precious portion of the heritage which I have received from my lamented father, and to call to mind the cordial relations which he always preserved with vast multitudes of workmen and with a large staff of agents of every grade and disposition of mind. I see among contemporary employers many evidences of the same success in conciliating their dependents.

While in England we are happily doing away with the great evil of employing young children in our factories, all the Chambers of Commerce in Belgium unite in deploring the increasing moral and physical degeneracy of the working classes, owing to the premature employment of children. In the Belgian factories for

spinning and weaving flax, cotton, and wool, children from ten to twelve years old are very generally admitted, and work twelve hours a day. In the Belgian coal-pits there are 8,000 children under fourteen years of age, of both sexes. Of children between ten and twelve, 2,400 are employed, 700 above and 1,700 below ground.

In 1866, out of their total population of 4,827,000 more than one-half were unable to read or write. The necessity for the employment of children is best proved by the description, given by Mr. Kennedy, of the position of the Belgian operatives at Alost and Tirmonde, where a first-class hand earns 28*l.* a year, while the smallest sum on which a man can exist is 20*l.* a year. Indeed, existence is only made possible by the earnings of the children in factories, and by the possession of a small garden in which vegetables are raised.

In the English factories, where a larger proportion of women are employed than in the factories abroad, it has recently been proposed that the number of hours of labour should be limited by law. The proposal is supported by Messrs. Bridges and Holmes, on the ground that, by exciting a spirit of rivalry between them, women can be goaded on to over-exert themselves in a manner which would not be observed among men. A woman, we are told, who can mind four looms without an assistant has a certain position, and becomes an object of attention. 'Hoo's a four-loomer, hoo's like to be wed,' will be commonly remarked of such an one.

The Association of Employers, though differing on almost every other subject from Messrs. Bridges and

Holmes, suggest that women should be excluded from factories for three months after their confinement. Great evils have been found, by experience, to ensue from the too early return of the mothers to factory labour. Let us venture to hope that another Session of Parliament will not be allowed to pass by, without placing on the Statute Book a legal prohibition against a practice which is universally condemned by those most competent to form an opinion.

The demand for a reduction of the hours of labour, which has been so strongly and successfully urged by certain classes of our operatives, is not universally supported either at home or abroad.

The average length of a working day in Switzerland is twelve hours, exclusive of the time for meals. The general tendency is to a reduction of hours, and laws have been passed, limiting the length of the working day in some cantons to twelve hours. These changes are, however, almost entirely due to the efforts of local politicians. A proposal of this nature recently made in Zurich, and sanctioned by the Cantonal Legislature, was eventually thrown out by the popular vote.

At Rouen, Mr. Redgrave found no strong desire for a diminution of the hours of labour in the cotton factories. The operatives were chiefly solicitous for a rise of wages. On this subject the majority of the workpeople abroad seem to entertain similar views. Messrs. Bridges and Holmes, in their report on the condition of operatives in English factories, say that the workpeople are by no means unanimous. Among the

women especially, many are apathetic, and some are positively opposed to a limitation of the working hours.

In the United States, at Lowell, near Boston, I ascertained by personal inquiry on the spot, that the working hours were sixty per week, and that no indication had yet been given of a disposition among the operatives to reduce the hours.

Though there may be reason to regret that the working class have not reaped more substantial and universal benefits from the recent additions to their wages, we have at least the satisfaction of knowing that there has been some decrease in the amount of pauperism.

Meanwhile the tide of emigration has never ceased to flow. The proportion, too, of English and Scotch to Irish has, of late years, much increased. In 1872 the wide labour-field of the United States absorbed 199,000 out of a total number of 252,000 emigrants from the United Kingdom. In the same period 33,000 sailed for the ports of British North America. The United States offer many advantages to the newly-arrived emigrants. The homestead law gives, for a merely nominal sum, the right to a homestead and 160 acres of land to every individual, who is actually a citizen of the United States, or has declared his intention of becoming such.

In examining the various circumstances which tend to raise the price of labour in England, the prevailing high wages in the United States, and the increased facilities for emigration, must ever be kept in view. The nominal rate of wages in America may indeed

frequently convey a delusive idea of prosperity; yet it cannot be doubted that the thrifty, skilful, and industrious artisan has large opportunities of advancement in the New World.

A great majority of the emigrants go out to join some friends already satisfactorily established. When this is not the case, it is essential to the emigrant's success that he should have accumulated not merely a sufficient sum to defray the cost of his voyage across the Atlantic, but enough to enable him to travel, if necessary, far into the interior, and to visit, it may be, several rapidly rising cities in the West, before finally settling down. The artisan who is able to maintain himself for some months after landing at New York, and to make a wide exploration of the country, will be sure in the end to find a favourable opening. Alas, how few of those who emigrate from this country are possessed of such resources!

Many examples of the prosperity of the working classes came under my own observation on a recent visit to America. The workpeople are paid as far as possible by the piece. The monthly pay-sheet at the Merrimac Mills, at Lowell, where 2,600 hands are employed, amounts to 75,000 dollars, which gives an average of thirty dollars a month, or 30*s.* a week. The majority of the workpeople are Americans, but there are many from Canada and the Old Country. The proprietors of the mills have established several lodging-houses for the unmarried women in their employ. At each of these houses some thirty women are lodged. The house is placed under the supervision of a respectable

matron. The cost of living is 3½ dollars a week, and female operatives can earn from 14*s.* to 16*s.* a week over and above the cost of their board and lodging. The men pay for board 2*s.* a day, and their wages vary from 7*s.* to 10*s.* a day.

At the Lonsdale Company's Cotton Mills, near Providence, in a factory containing 40,000 spindles, one spinner attends to 1,408 spindles, and in weaving, one weaver attends to from four to six looms. In England, the proportion would be, on the average, one hand to every three looms, working at a higher speed than they have attained in America. Male weavers were earning from 44*s.* to 52*s.*, and female weavers from 40*s.* to 44*s.* weekly. Spinners earn from 4*s.* to 6*s.* a day. Women pay for board and lodging in lodging-houses, provided by their employers, 12*s.*, and men 16*s.* a week. The operatives, earning these wages, are better able to save money than the operatives in our own country; and many of the hands at the Lonsdale Mills have 1,000*l.* to their credit in the Savings Bank. At the great Harmony Mills at Cohoes, near Albany, where 4,000 hands are employed, two-thirds are emigrants to the States, principally English and Scotch, although there are many Germans and some French. The general wages are for women from 3*s.* to 6*s.* a day, for men from 6*s.* to 10*s.* a day. The cost of living is moderate, and assuming that a female operative earns 28*s.* a week—by no means a high average—she has 16*s.* a week to spend on dress and luxuries. At Cohoes a weaver attends to four, five, or six looms, but the machinery is not worked at so high a rate of speed

as in Lancashire. The mule is never worked at a speed exceeding three stretches a minute.

In Quebec wages have of late been rapidly advancing. Artisans can now command 8*s.* a day, and labourers employed in unloading ships, whose employment, however, is uncertain in summer, and in winter wholly ceases, earn 10*s.* to 12*s.* a day. A man with a family can live well on 4*s.* a day. The long winter is the great drawback to the prosperity of the working class in Canada. Quebec has its Wapping, its extensive suburbs, chiefly occupied by the working classes; and there is no external indication in these quarters of a condition of life superior to that attained by the majority of our working men at home. In the Ottawa district, in Canada, the young farmers are able to find employment in winter by leaving their homes, and going up to the forests to cut timber. They earn 30*s.* a week, and they are boarded in addition. In the spring the lumberer returns home with a considerable sum of money saved. He carries on his farming operations throughout the open season, and returns to the forests in the autumn. The life is toilsome, and involves a long separation from the fireside at home; but the perseverance of a few years will result in the accumulation of a valuable capital for farming operations, and secure to the settler his future independence.

Ottawa is one of the rising towns of Canada. Its prosperity is derived from the timber trade, and from its being the seat of the Government. Wages in Ottawa were last year (I speak of 1872) extravagantly

high. Masons were earning 14*s.* a day. All classes of artisans employed in building were paid from 10*s.* to 12*s.* a day. For four or five months, however, in winter building operations are suspended. Provisions are cheap, and house-rent is the only costly item.

At Hamilton, in Upper Canada, the wages for artisans are 8*s.* a day. House-rent is about 28*s.* a month. The expense of fuel in winter is nearly equal to the sum paid for house-rent. Food is cheap. A stock of salt beef can be laid down for the winter at the price of $1\frac{1}{2}d.$ a pound. The agriculturists in the Hamilton district are in a prosperous condition. Every settler travels in a light waggon, drawn by a pair of serviceable horses. The population seemed robust and healthy.

In other settlements forming part of the Dominion the appearance of the people was less satisfactory. At Charlottetown, in Prince Edward's Island, the universal vehicle is drawn by one horse instead of two, as at Hamilton. It was sad to see the population generally so pale and thin, and, in appearance, sickly and out of health. The reason is not obvious for this marked physical deterioration of the descendants of Scotch, Irish, and English settlers. Probably the long winter is, to a great extent, the cause. The impossibility of active outdoor operations at that season, and the consequent temptation to spend the day in smoking and drinking in over-heated rooms, is extremely prejudicial to the health of the population. At Pictou, in Nova Scotia, the inhabitants appeared more robust. The wages for ordinary shipwrights are 8*s.* a day, and

taking into consideration the cost of living, the working classes are as well off as in any part of Canada.

In comparing the American and English operatives, or, rather, the English operatives, when transplanted to the States, with the hands who have remained in the Old Country, it would seem that there is, as a rule, a higher development of skill in the individual operatives. The difference is attributable to the conviction that the present high rate of wages in the States could not be maintained, unless the utmost skill and diligence were put forth.

The results which have followed from the reference of disputes relating to wages to arbitration are a sign of the happiest augury for the future relations between employers and employed. It has been urged, on the part of the employers, that the working class will only accept the decision of arbitrators when it is favourable to themselves. In this, as in other respects, the organisation of the unions has proved beneficial. The influence which the more enlightened workmen, acting as members of the executive committees of the unions, possess over their less instructed fellow-workmen, have been the means of securing obedience to every decision arrived at after careful investigation, conducted in an impartial spirit. Such influence becomes more important when the members of the trades unions are for the most part uneducated men. It is always more difficult for an employer to negotiate or to argue with a boiler-maker than with a fitter. The executive councils of the unions have entitled themselves to the gratitude of the employers of labour, by accepting the use of

machinery, the substitution of which for manual labour becomes more and more indispensable with every advance in the standard of wages.

It is not by encouraging useless strikes, or by making an attempt, which in the end must always be defeated, to sustain a vast body of workmen and their families, when not in the receipt of wages, that the wire-pullers of the trades unions will best serve the interests of their clients, or enhance their personal influence among them. There is a wide field of usefulness open to these captains of our great hosts of workmen, in which success is to be attained, not by war, but by diplomacy. The state of the trades, in which their clients are employed, should be carefully watched, and every variation in the prices quoted, every fluctuation in the cost of the raw materials should be noted. And here I may frankly admit that the proposal of the International for a universal strike contained a few grains of wisdom; for it is clear that, if the cost of producing an article in England were so much enhanced by an advance of wages, that the foreign manufacturer would be enabled to undersell us in every market, it would be an act of self-destruction for English workmen to insist upon a rise, which would have the inevitable effect of depriving them of employment.

In such a case an advance of wages can only be possible where the workmen in the competing countries agree to act in concert; or where, by superior skill or machinery, the more highly paid workman is able to turn out a larger amount of work.

It has been already pointed out that in England we have to contend against competition of two kinds—1. against the cheaper labour of the Continent on the one side, and 2. against the superior natural resources of America on the other. While we occupy at the present time a highly favoured position, which has been attained not merely by the skill of our workmen, but by the administrative skill of their employers, and the gradual accumulation of an ample capital in their hands, the race with other great manufacturing countries is very close. The Swiss have entered into competition with our own manufacturers, both in the home and foreign trades. The exports of textile fabrics from Switzerland, as we learn from Mr. Gosling's report, have risen from 12,485,000*l.* in 1860, to 26,464,000*l.* in 1871, an advance of 112½ per cent. In this total the exports to the United States have risen from 509,000*l.* in 1862, to 2,159,000*l.* in 1872, in other words, over 324 per cent. In cheap silks and ribbons the Swiss are able to compete with the British producer in the English market; and, to sum up the case in the words of Mr. Gosling, 'the advantages of Switzerland in competition with Great Britain are the use of water power as a substitute for steam power to the extent of upwards of 80 per cent., low wages, long hours of labour, and a minimum expenditure for management.' On the other hand, as an inland country, Switzerland has to pay heavy freights, the workmen are inferior in activity to our own, buildings for machinery are more costly, and, from want of capital, production is on a smaller scale than here. The

balance, however, in the opinion of Mr. Gosling, was greatly in favour of Switzerland, and could not fail to become greater from day to day.

Such being the case as regards textile industry, Mr. Lowthian Bell has recently pointed out, that, in ores of the finer descriptions, the resources of the United States are unlimited, while in coal our own wealth is, in comparison, poverty. There is but one bar to the boundless production of minerals in the New World, that is to say, the want of hands to manufacture them.

A large number of the working class in Germany have been fascinated by the fanciful theories of Lassalle. His system is founded entirely upon the pernicious principle that the State is to do everything, and the people nothing for themselves. Karl Marx, as the successor of Lassalle, is the ruling spirit of the German socialists, and has become a prominent figure from his connection with the International. The socialist journals in Germany delight to reproduce the programme and doctrines of that society. They make noisy professions of atheism. They applauded the insurrection of the Commune in Paris. They have a collection of songs of their own. They disavow the warlike policy of Germany, and have endeavoured to substitute the community of class interests for the community of race, language, and country. It must not, however, be supposed that the number of these unpractical visionaries is proportionate to the noise which they make in the world. The influence of socialistic doctrines is not so great in England as on the Continent, and it is weaker in America than in England.

I hope, therefore, that no disposition may be manifested here to abandon the hopeful work of social, moral, and material progress for the pursuit of visionary and impossible schemes.

The amelioration of the condition of the poor is not to be brought about by destroying the ancient fabric and foundations of our social and political system. It is easy to destroy, but most difficult to restore, the institutions created by past generations, in which there lived men not less great, and wise, and good than the most gifted of our own contemporaries. Mr. Ruskin, a devoted friend of the working classes, in a passage of more than ordinary eloquence, has truly said, 'This is the thing, which I know, and which, if you labour faithfully, you shall know also,—that in Reverence is the chief power and joy of life;—Reverence, for what is pure and bright in your own youth; for what is true and tried in the age of others; for all that is gracious among the living, great among the dead, and marvellous in the Powers that cannot die.'

Our artisans may believe that the profits of former days were so large that employers can afford to pay the present rates of wages, without raising their charges to the consumers. There is but one means by which this fallacy can be exposed. The workmen must become to a certain extent their own employers. In a co-operative establishment, created in part by his own hardly-earned savings, the handicraftsman will find himself called upon to apportion equitably the earnings of his business between labour and capital. In this double relation he will learn how great are the diffi-

culties which beset the employment of capital in productive industry in a country in which competition is so keen as it is in England. In no other country does capital command so low a rate of interest; and, if large accumulations of capital have been made, and money is therefore cheap, it should not be inferred that the rate of profit has been high by comparison with other countries, but rather that our employers of labour, as a class, have been distinguished by their frugality, their perseverance, and their enterprise. I am grateful, therefore, to Mr. Holyoake, for his vindication of their claims at the recent Co-operative Congress. He justly said that capital was the enemy of nobody, but rather the nursing mother of production.

The co-operative principle, in its application to the business of distribution, has been already most successfully developed, and working men should be encouraged to create co-operative establishments for the purposes of production. The accumulation of the necessary capital is an obvious difficulty. As wages were never so high as at present, so this obstacle can be more easily surmounted now than at any former time. Some men may object to recognise the special responsibilities of a fellow-workman holding the office of manager of a large business, by giving a proportionate salary. It is because the recognition of authority is essential, whenever anything practical is to be done, that the International Society has shown such uncompromising hostility to the co-operative principle. The denial of a proportionate reward for superior intelligence or industry is the first article of its catechism. The absurdity of

attempting to combine the energies of numbers for any definite object, without placing a competent chief at their head, has been humorously exposed by Mr. Carlyle. 'Ships,' he said, 'did not use the ballot-box at all, and they rejected the phantasm species of captains. Phantasm captains with unanimous votings! These are considered to be all the law and prophets at present. If a man shake out of his mind the universal noise of political doctors in this generation, and in the last generation or two, and consider the matter face to face with his own sincere intelligence looking at it, I venture to say he would find this a very extraordinary method of navigating, whether in the Straits of Magellan or the undiscovered sea of time.'

English workmen are less easily deluded by tall talk and sophistry than the more excitable populations of the Latin race; and I would earnestly invite them to apply their practical sagacity to the difficult yet hopeful experiment of co-operative industry.

To return once more to the familiar axiom, the price of labour, like that of every other commodity, must mainly depend upon the relation between supply and demand. The wages of skilled workmen have risen, because skilled workmen are scarce. How shall we increase their number and improve their skill? The answer is, by bringing recruits into our industrial army from a class of society, which has hitherto exhibited too strong a prejudice against manual labour. The same aversion to handicraft of every kind exists in the United States and Canada. In America a skilled workman earns thirty dollars, a clerk only fifteen dollars a week.

It is almost as difficult for a clerk to obtain a situation in New York as in London. A skilled workman can always command employment. It is unnecessary to dwell on the evils that must ensue from a disproportionate increase in the non-productive classes of the community. Lord Bacon has truly said that a population is not to be reckoned only by numbers, 'for a smaller number that spend more and earn less do wear out a greater number that live lower and get more.' My father's advice was often sought by parents anxious for the future of their sons. His counsel always was, that a young man, whose destiny it must be to make his way unaided through the world, should begin by learning a trade. It is a laudable ambition in a parent to endeavour to raise his family to a better station in life. He cannot bestow on his children too high an education. But a wise man will be on his guard, lest the enjoyment of such advantages should render those occupations distasteful, which afford the most secure and ample livelihood to those whose lot it is to labour. When justly appreciated, the condition of the skilled artisan should be as much esteemed as that of any other class of the community. He whose life is passed in useful service to his fellow-men, whatever his special calling, holds an honourable station, and social dignity will ever be most effectually maintained by those who are the least dependent upon the favours of others.

In conclusion, I would tender a few words of advice to my fellow-countrymen of the so-called working classes, for whose welfare I am bound to feel the deepest solicitude. Their just claim to share in the

benefits arising from a thriving industry has of late been liberally recognised. The earnings in many trades have been unprecedented. It should not be forgotten that forethought is an especial duty in a time of prosperity. At no distant period, the progress of our commerce may sustain at least a temporary check. It will be sad indeed if the receding tide leaves behind it large multitudes of our highly-paid workmen without the slightest provision to meet a period of adversity.

LECTURE IV.

PUBLIC ELEMENTARY EDUCATION IN THE UNITED STATES.

READ BEFORE THE HASTINGS HISTORICAL SOCIETY, DECEMBER 1873.

AMONG the many interesting lessons which may be learned by the English traveller in the United States, none are more instructive than those which may be acquired from a careful observation of the provision made for the education of the people. While the republican institutions of the States are, in many essential particulars, less satisfactory than our own, as a set-off against other disadvantages, the democratic principles upon which the Government is established, and which confer upon every citizen political power and responsibility, impose a corresponding obligation on the State to provide education for the people. The obligation has been nobly fulfilled. In the most advanced outposts of civilisation, on the furthest limits of the settled territories of the United States, the construction of the railway, and the establishment of the school are considered as the primary duties of the community. Every district is compelled by law to provide the necessary accommodation for the school population;

and public opinion is so strongly pronounced in favour of an efficient system of popular education, that legal penalties are not required.

I shall not attempt to discuss, on this occasion, the expediency of placing an unrestricted sovereign authority in matters of government in the hands of the people. It has been said by Carlyle in his 'Latter Day Pamphlets' that it is the noblest, not the sham noblest, that must, in some approximate degree, be raised to the supreme place: he, and not a counterfeit, under penalties! Will the ballot-box raise the noblest to the chief place; does any sane man deliberately believe such a thing? All must admit that, the more freely the power of control over the Government is entrusted to the people, the more important it becomes to establish an efficient system of popular education. It is impossible for an elector to vote intelligently, unless he has received at least the rudiments of education. In a country where no efficient means have been provided for the instruction of the people, the ignorant electors must become the easy dupes of interested agitators, and the helpless victims of misrepresentation. As a safeguard against the dangers of democracy, the Government of the United States insist that every child of school age shall receive adequate instruction in the public schools.

In England we have, until lately, been far behind the United States in relation to that most essential element of civilisation, popular education. The Elementary Schools Act of 1870 should have preceded, not followed, the Reform Bill of 1866. It is now too

late to recall the past, and it will rather be the object of every enlightened patriot to do what in him lies to promote the success of the great work of education, which the Government has at length taken in hand. With this object in view, we cannot do better than examine the educational institutions of America.

In my recent short journey, it was not possible for me to visit a great number of schools; but I was fortunate in having the opportunity of seeing the most perfectly organised educational institutions in America: the public schools of Boston. Combining the statistics and information contained in the last annual report of the School Committee of Boston, with my own personal observations, I hope I may be able to give a tolerably lucid explanation of the organisation and condition of their schools. I will commence with a summary of the more important educational statistics of Boston. The population, according to the census of 1870, numbered 250,701 persons, of whom 45,970 were between five and fifteen years of age. The average whole number of pupils, belonging to day-schools of all grades, during the year 1871-2, was 36,000; and the average daily attendance of pupils was 33,500. Thus the average percentage of attendance at all the day schools was 92·5. The schools of Boston are divided into three classes, namely, primary schools, grammar schools, and the Latin school and English high school. The average attendance at the primary schools was 13,614; at the grammar schools, 18,312; at the high schools, 1,430. The ratio of the number of pupils belonging to the schools to the school population is 78 per cent.; and

as there is a law of the State of Massachusetts for enforcing compulsory attendance, which, though mildly administered, is backed up by a strong public opinion, it may be assumed that the number of children attending school in Boston represents the highest practicable result, attainable by the enforcement of a strict law of compulsion. Dividing the children under instruction at the primary schools into a classification, according to their age, there were, of children of the age of five years, 2,447; six years, 3,275; seven years, 3,319; eight years, 2,772; nine years and over, 2,747. In the grammar schools the number of pupils between eight and ten years of age was 3,027; between ten and twelve years, 5,947; between twelve and fourteen years, 4,941; between fourteen and fifteen years, 1,596; over fifteen years, 1,110. Boys cannot be admitted to the public Latin school or the English high school before the age of twelve years. The age of admission into the girls' high and normal schools has been fixed at fifteen years. The schools are in session ten months in the year; and the large number of pupils attending allows them to be very strictly classified according to their attainments.

When we compare the educational statistics of Boston with the state of public education in England, at the date immediately preceding the passing of the Elementary Education Act of 1870, we see how great are our own deficiencies, and what a formidable task lies before us, if we aim, as we ought to do, at the standard which has been reached in America. According to the last report of the Committee of Council on

Education, there were 1,336,000 scholars on an average in daily attendance at school in England and Wales. The accommodation supplied by the existing Parliamentary schools would be sufficient for 2,295,894 scholars; and it is assumed by the Educational Department that 3,500,000 of the population of Great Britain ought to be daily in attendance at elementary schools. The general diffusion of education of a superior order through a large population cannot be accomplished immediately, nor without a large expenditure. In their liberal appropriation of the local resources for the maintenance of educational institutions, the people of Boston set us a good example. They have never shown an ignorant impatience of the taxation imposed for this purpose. The cost of the public schools of Boston in 1870–1 was, in round figures, 300,000*l*. Rather more than half the total expenditure was applied to the payment of the salaries of the teachers. The returns prepared by the School Committee of the city show a great increase of expenditure, as compared with the year 1867–8, when the total amount was under 200,000*l*. The two heads of expenditure, which show the largest increase, are the salaries of the teachers and the cost of new school-buildings. The increase is not attributable solely to the larger attendance at the schools. The expenditure in educating each individual child has increased from thirty shillings per scholar, in 1867–8, to thirty-five shillings in 1870–1, an augmentation which proves the determination of the people to make large sacrifices, in order to improve the standard of public education. The average expen-

diture per scholar in attendance at the inspected schools in Great Britain in 1872 was 1*l.* 7*s.* 6*d.* If it be the will of the English people, as I trust it may be, to secure equal educational advantages for the rising and coming generations, they must be prepared for a proportionate taxation. The total income of our public elementary schools in 1872 was as follows:—

	£
Endowments	89,917
School Board Rates	5,085
Government	755,049
Voluntary Contributions	557,273
School Pence	707,283
Other sources	31,466
Total	£2,146,073

I have dwelt at length upon the arithmetic of my subject, though I know that it is a weary task to listen to long recitations of statistics. Yet, after all, figures, if they represent facts, are of high importance, and, when reduced to tables, they give the most convenient data for the purpose of ascertaining the educational progress of the community.

I now proceed to give a *résumé* of the general regulations of the public schools of Boston. The teachers are reminded, in the first portion of the regulations, of their duty, 'in all their intercourse with their scholars, to strive to impress upon their minds, both by precept and example, the great importance of earnest efforts for improvement in morals and in manners, as well as in useful learning.' The morning exercises of all the schools commence with reading by

the teacher of a portion of the Scriptures, to be followed by the Lord's Prayer, repeated by the teacher alone. The afternoon lesson is closed with appropriate singing. Instruction is given in good morals daily in each of the schools, and the principles of truth and virtue are faithfully inculcated upon all suitable occasions. It is the duty of the instructors, as far as practicable, to exercise a general inspection over the pupils in respect of their moral conduct both in and out of school, and also while going to the school and returning home. The morning lessons of the grammar and primary schools commence at nine, and close at twelve o'clock, with a recess of twenty minutes in the middle of the session. The afternoon lessons commence at two, and close at four o'clock. Every scholar must have some kind of physical exercise each forenoon and afternoon. In order to keep alive the patriotism of the citizens of the United States, annually, on the school-day next preceding February 23, each master is required to assemble his pupils, and read extracts from Washington's 'Farewell Address to the People of the United States;' combining therewith such patriotic exercises as he may think advisable. It is to be desired that the love of their country should be instilled betimes into the hearts of our own children, by recounting to them the brightest pages of the history of England.

Under the regulations in force for the management of the primary schools of Boston, each school should contain, as nearly as possible, 49 pupils, which is intended to be the standard number. The actual average number is 46·7. The number of pupils in the

grammar schools is much larger, varying from a maximum of 1,016, to a minimum of 359. The number of teachers in the grammar schools is increased in proportion; so that the whole number of pupils to a teacher is limited to 45. The subjects of instruction in the primary schools are suited to the tender age of the children, and include reading, spelling, arithmetic, and singing. Reading is taught by Leigh's phonic exercises; and the School Committee say that, 'Six years of careful experiment in several schools in Boston have shown the best results from this system. Pupils learn the sounds belonging to phonic type very readily; and, as those sounds are unchanging, the labour is much less than in gaining the mastery of a less number of letters, most of which are liable to variations.' Within six months, the ordinary pupils get through the second reader—a point which was never reached by the pupils taught in the old method in less than eighteen months. 'Is it not much,' they ask, 'to add a year to the practical duration of human life?' We had the pleasure of witnessing the process of instructing a class of very young children in reading, by Leigh's method. The task of the pupils appeared to be lightened in a remarkable degree. Instruction in the art of reading monosyllables appeared rather to resemble a lesson in singing. In the grammar schools of Boston, the common branches of an English education are taught, including writing, spelling, grammar, arithmetic and mental arithmetic, geography, natural philosophy, singing according to Hullah's method, and drawing. The latter accomplishment has been only recently introduced

into the public schools of Boston. The services of a very able master from the School of Science and Art at Kensington were secured; and all the teachers in the public schools were placed under his instructions. As the teachers have acquired a knowledge of art from him, they have in turn imparted what they have themselves acquired to the pupils under their charge.

The importance, from a political point of view, of maintaining a high standard of instruction in the grammar schools, has been fully appreciated in the United States. The Boston School Committee, in their report, declared that the condition of the grammar schools must always be a subject of solicitude. For the great mass of pupils, these must of necessity be the sole means of education. They are the academies and colleges of the poor. 'When,' as they properly observed, 'we remember that the fabric of free government rests upon the support of all our citizens, and that the ignorant and the vicious have equal political power with the wise and good, we feel the responsibility that belongs to teachers and supervisors of instruction, and are impelled, not only to urge the bringing of all youth within the reach of good influences, but to provide for them the best and amplest training attainable.'

The public Latin school of Boston—one of the institutions already enumerated—is designed to give thorough general culture to boys intending to pursue the higher branches of learning, or preparing for professional life. Each candidate for admission must be at least twelve years old; he must be able to read English fluently and correctly, to spell all words of

common occurrence, and to write well and readily from dictation. He must understand mental arithmetic, the simple rules of written arithmetic, with reduction and fractions, both vulgar and decimal. He must be able to explain the terms most used in geography, and to state the leading facts. He must have a sufficient knowledge of English grammar to parse common prose. The studies at the Latin school embrace the following subjects and authors:—*English*: Scott, Goldsmith, Campbell, Wordsworth, Cowper, Tennyson, Leigh Hunt, Sterne, Beattie, Morris, Hazlitt, Gray, Addison, Moore, Burns, Hood, Shelley, Rogers, Milton, Pope, Thomson, Collins, Coleridge, Keats, Burke, Tyndall, Dryden, Spenser, Thackeray, Lamb, Ruskin, Shakspeare, Macaulay, Junius, Marvell, George Herbert, Byron, Carlyle, Channing, Ben Jonson, and Bacon. *American*: Hawthorne, Longfellow, Irving, Bryant, Prescott, Holmes, Lowell, Whittier, Emerson. *French*: Racine, Corneille, Molière, Rousseau. *Latin*: Cæsar, Ovid, Quintus Curtius, Virgil, Cicero, Lucian, Plutarch, Sallust, Horace, Tacitus, Lucretius. *Greek*: Homer, Isocrates, Euripides, Demosthenes, Plato, Thucydides, Sophocles, and Aristophanes. The list of studies includes arithmetic, algebra, plane geometry, logarithms, plane trigonometry, physics, mechanics, chemistry, astronomy, music.

The Latin school, as may be inferred from the list of studies and authors, affords to the pupils a thoroughly liberal education. At this school, the sons of all the wealthiest citizens of Boston are educated, side by side with youths of their own age, who come from a very

different grade of society. No disadvantage is found to arise from these social inequalities; and, doubtless, the democratic institutions of the country contribute greatly to facilitate the fusion of all classes of society in a common institution for a common object. From the harmonious intercourse of all classes in the pursuit of learning, may we not learn some lessons, to be applied with advantage to ourselves? Here, in England, from the earliest age, the various grades of society are kept apart; and thus it happens that so little is done to redress the inequalities of fortune by social kindnesses and by extended sympathies. If the children of the rich and the poor knew more of each other in earlier life, artificial distinctions would be very commonly disregarded; and a more ready disposition would be evinced by every class to appreciate the characteristic virtues and to pardon the inevitable faults of men, placed in different circumstances from their own. In Switzerland it is the great object of those in easy circumstances to ignore all social distinctions, and to keep the workman and the employer on a footing of social equality.

> Though poor the peasant's hut, his feasts though small,
> He sees his little lot the lot of all:
> Sees no contiguous palace rear its head,
> To shame the meanness of his humble shed.

In such a community as our own, a wider diffusion of educational advantages would have the happy effect of assuaging the bitterness of envy, and imparting to a greater number the advantages of our advanced civilisation. As no other means exist for obtaining an equally perfect preparatory education, the Latin high

school has become one of the most important contributories to the Harvard University. Almost all the young gentlemen of Boston receive their education at the Latin high school, and at Harvard.

The English high school is another very valuable educational institution in Boston. It has been established to afford to those boys who have completed the course of study prescribed for the grammar schools, the opportunity of pursuing more advanced studies, and of completing a liberal course of education in English literature. Candidates for admission must be twelve years of age, and must pass a satisfactory examination in spelling, reading, writing, English grammar, arithmetic, modern geography, and the history of the United States. The school holds one session daily, from 9 A.M. until 2 P.M. The authors and subjects included in the scheme of studies are set forth in the following enumeration. In mathematics the subjects are: intellectual arithmetic, book-keeping, algebra, geometry, trigonometry, navigation, and descriptive geometry. In English literature the scheme embraces a course of reading from the best authors, history, antiquities, philology, and composition; and in French, grammar, conversation, and composition. The elements of German are also taught. In physical science, the scheme embraces navigation, astronomy, with the practical study of the stars, and the explanation and use of instruments, mechanics, chemistry, mineralogy, anatomy, and physiology. The English high school of Boston, in its character, aims, and organisation, is unique. There is no other school of the same type in America. It is

intended to offer to those who are preparing themselves for practical life, advantages conferred in the Latin school on students preparing for a professional career. It is intended to erect new and beautiful buildings in Boston for the high and Latin schools, the former to contain a thousand, the latter five hundred pupils.

One other educational institution yet remains to be described—the girls' high and normal school. This institution is intended to furnish to those girls who have completed the course of studies pursued at the grammar schools, the opportunity for higher intellectual culture, by a thorough course of advanced study, and to qualify for teachers those who desire to make that calling their profession. Candidates for admission must not be less than fifteen years of age, and must pass a satisfactory examination in spelling, reading, writing, arithmetic, English grammar, geography, and history. The course of study extends over a period of three years, and includes physical geography, algebra, geometry, trigonometry, natural philosophy, astronomy, geology, chemistry, mineralogy, and botany, music, drawing, English literature, French, German, Latin, intellectual and moral philosophy, history, penmanship, book-keeping, and instruction in the theory and practice of teaching.

The School Committee of Boston, while highly commending the general course of study pursued in the normal school, as an education for the pupils themselves, complain that the institution has been a failure as a seminary for training up teachers. They speak strongly of the advantages of the higher branches

of education in all circumstances and in all countries, especially in the United States, where there are few persons whose position is secure against the hazards of commerce, and no one can predict the coming fortunes of any family. 'The delicately nurtured girl may be obliged by some turn of affairs to become a teacher, and the energetic daughter of poorer parentage may become the possessor of wealth. If they have been judiciously trained they can exchange places without great difficulty.' Hence they rejoice 'that the children of the rich and poor should meet under one roof to receive a training that is best for all.'

While the School Committee urge the importance of improving the system of educating the girls, so as to adapt it more effectually to the preparation of the students for their intended vocation as teachers, the excellence of the education given in the normal school, from every other point of view, is undeniable. An inspection of the examination papers in the sciences, mathematics, history, and modern languages, will show that a remarkably high standard of attainments has been reached.

A visit to the schools of Boston, and especially to the normal schools, will present to the traveller one of the most interesting spectacles which can fall under his notice in America. He will observe the size and convenience of the buildings, the happy faces, good behaviour, and intelligence of the pupils, the graceful manners and intellectual power of the teachers, as evinced in their demeanour, their conversation, and their power of teaching.

In America the system of pupil teachers is unknown. The normal schools afford the only opportunity of preparing teachers for the elementary schools and the grammar schools. In a paper by Miss Brady, read before the Social Science Association, we are informed that the majority of the teachers in the high schools are men who make teaching a profession. The others are women, most of whom teach only for a period of from two to eight years preceding marriage. Women teachers are now employed in preference to men. With the same experience and attainments, they teach better than men, and manage their pupils with more tact. Few women, however, are as yet fitted to teach in the higher departments of study. They do not generally succeed, at the head of a school, in managing their women assistants as well as men. Women do not so readily submit to the authority of other women as they do to the authority of men. They have not as much influence in a community as a man has. They are not so readily received as visitors in the families, and this social influence is found to be of great advantage in giving to the school character and popularity. Where women do precisely the same work as men they get much less pay, but a more enlightened spirit on this subject is beginning to prevail. Teaching in America is for the most part a temporary occupation, followed chiefly by young people between the ages of eighteen and thirty. How much the schools lose by the immaturity and inexperience of the teachers it is difficult accurately to estimate; but that they gain much by the freshness and vigour of these young

minds is unquestionable. The teachers take a far higher position in society than teachers occupy in most other countries, and the success of the public schools is mainly due to this cause.

It may be worth while to mention that the number of teachers in the schools of Boston is 951, of whom 123 are males, and 828 females. The total expenditure for the salaries of teachers is 16,000 dollars, giving an average income of 200*l.* a year. Hence it appears that their profession is more liberally paid than in this country, though a considerable allowance must be made for the additional cost of living.

The utmost pains have been devoted in England to the training of teachers for public elementary schools, and hitherto the number of students who have been trained for the work has been sufficient to meet the rapidly increasing demand for their services. It has been already pointed out that in America the teachers are obtained from a higher grade of society than that which has hitherto supplied the teachers in our own elementary schools. An experiment has been tried by the Bishop of Chichester, under whose auspices Bishop Otter's college has recently been reopened, to attract candidates from the same class in our own country.

Of late years the study of natural science has met with more encouragement in England than was formerly the case. The most popular subjects with the students are animal physiology, physical geography, mathematics, acoustics, light and heat, magnetism, and electricity. There is reason also to hope that the cultivation of music may be carried to a degree of perfection

not hitherto attained. Mr. Hullah has been appointed inspector of music, and his co-operation is a guarantee for the introduction of a satisfactory system of teaching throughout our elementary schools.

The assurances we possess of the efficiency of our training colleges are a source of profound satisfaction to all who truly care for the welfare of the people. On this subject some most apposite remarks from the last report of Mr. Cowie, some time Inspector of the Training Colleges and now Dean of Manchester, will be read with attention. 'The special training,' he says, 'of our teachers is for a wide, necessary, and somewhat humble work, but one of immense importance. It is laying the foundation of knowledge, developing the powers of all the children of our humbler classes, giving them the key of knowledge, initiating them into the vast field of self-improvement, which is open to all; teaching them to benefit by the experience of past generations as well as of their own, to be able to express their own ideas intelligibly, and to reason, and reflect, and draw their own conclusions.'

Although such objects of education are represented by the homely names of reading, writing, and arithmetic, it ought never to be forgotten that reading—intelligent reading—is the entrance to the accumulated stores of human wisdom; writing is eventually the power of expressing ideas, by which a man is brought to think what he means to say, and to judge whether he has expressed himself with accuracy; while arithmetic is the logic of the million; it is, when intelligently taught and thoroughly mastered, the power of calculation, i.e. of predicting and verifying consequences.

Let no one say that there is not, in education in these subjects, in the hands of a clever teacher, ample scope for the highest aims. We may, with Lord Bacon, summarise the scope of education in a single phrase: 'Reading maketh a full man, conference a ready man, and writing an exact man.'

If our children in our elementary schools were well prepared for the business of life, we should have attained the object we now have in view; we should have a shrewd intelligent people who could not be imposed upon by quacks, whether social or political, and we should look with confidence to the solid improvement of the social condition of the labouring classes, and to their general loyalty and steadiness of character.

Our teachers are generally prepared in the training colleges for this broad and manly exercise of their profession. Those whose task it is to render the children of the poor fit for the stern battle of life, must, with rare exceptions, be content to follow the path of duty unseen, unheard, and only appreciated within the limited circle of their parish or their town. It behoves them, therefore, to learn that difficult lesson for a man conscious of ability, how to 'banish the canker of ambitious thoughts.' They may, however, remember that, inasmuch as the power to do good to others is the worthiest aim of human ambition, the humblest teacher may not go altogether unrewarded.

At a time when compulsory education is constantly under discussion in this country, it cannot but be especially interesting to watch the result of experi-

ments in that direction in other countries. By an Act passed in 1850, the cities and towns of Massachusetts were empowered to secure the attendance at school of children between the ages of six and fifteen years. The offence of truancy was made punishable by a fine or by commitment to a house of correction. In 1852 the term of commitment was limited to one year, and three truant officers were appointed. Complaints against truant children are heard, not in open court, but in a private room, and the proceedings are divested as far as possible of a criminal character. Generally the parents or friends of a truant avert the judicial sentence by placing the child in some educational institution.

In 1862, children wandering about the streets, were subjected to commitment to the House of Reformation for two years. It was found that the increased stringency of the law had exercised a most salutary effect. In 1866, pursuing the policy already adopted, with so much advantage, a committee was appointed to inquire into the working of the law. They recommended that the law should be extended, so as to include additional numbers of neglected children. But the compulsory powers, so far as Boston was concerned, were at the same time withdrawn. The mistake which had been committed was soon acknowledged, and in 1867 the compulsory powers were restored. The revival of the former legal powers has been attended with eminently satisfactory results.

The only complaint now urged relates to the character of the House of Reformation at Deer Island,

which was intended as a penal establishment, and not for juvenile delinquents who have been convicted of no offence against the law. The truant children are charged with no crime. They are simply children suffering from neglect, in circumstances exposing them to the influences of ignorance and crime The truant law is designed for their relief, and to give them the nurture, care, and education of a home and a school. It is, therefore, argued that a separate establishment should be provided for the reception of the children committed for truancy.

The description which has been given of the principal schools maintained in Boston, at the public expense, will have awakened many reflections in an English audience. We admire the number and completeness of the schools. We are gratified to find that the most serious of the difficulties we apprehend or have actually experienced in this country—I mean the unwillingness of the parents to send their children to school, and the inability of children to remain long enough to acquire a liberal education,—have been scarcely perceived in the United States. We are amazed at the willingness of the public to sustain institutions so costly. But we apprehend that it would be impossible to imitate in this country the good example of the American people. It is clear that the success of the public schools in Boston is partly due to the fact that they are equally used by all classes of the community. The sons of gentlemen of the highest standing are educated in the Latin High School, where a better education can be obtained than at any private seminary. Happily, a

general disposition is manifested among all classes to avail themselves of the opportunity of obtaining a superior culture. Hence, the high schools are not regarded with the same jealousy which would be felt if they were frequented only by the privileged few. All are willing to add to the efficiency of schools from which they hope, sooner or later, to derive some personal advantage. It is not impossible that the creation of good public schools in every town and county in England might, in time, lead to the general use of such schools by all classes. Should such a change take place, it would materially tend to remove class prejudices, and to abolish unnecessary, and sometimes painful, social distinctions. We in England should aim at the standard of excellence which has been reached in Boston, where every child is gathered into the fold, and carefully instructed in the rudiments of learning, and where the development of education in the highest branches is diligently pursued. In the cities of New York and Boston, it is delightful to see the streets and omnibuses crowded in the afternoon with boys and girls, of the ages of fifteen, sixteen, and upwards, carrying each his or her package of books, on their way homewards from school. The conversation of these young learners often relates to the studies of the day, and leads to many earnest and animated discussions. Without popular instruction, free government is impossible, and household suffrage a delusion: while in an educated people there will be no credulous belief in the fanciful theories of socialism, nor shall we have cause to fear lest the blessings of political liberty be recklessly abused.

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LECTURE V.

THE DUTIES OF THE CHURCH IN RELATION TO THE LABOUR QUESTION.

READ BEFORE THE HASTINGS CHURCH OF ENGLAND CHRISTIAN ASSOCIATION, DECEMBER 1873.

I HAVE selected for the subject of my address this evening 'The Duty of the Church in Relation to the Labour Question.' The problem is most important, and the solution full of difficulty. Many clergymen doubtless would prefer to remain silent rather than offer advice to their flocks on these matters. Such an alternative cannot, however, be accepted. The need for the advice of the minister of religion on every question of real difficulty, whether in relation to things secular or to things spiritual, is most felt by the least instructed members of the Church. It is in the rural districts especially that the impartial advice of the clergyman, too often the only educated gentleman in the parish, is most essential. It is not possible for the work of the Church to be carried forward among an ignorant and needy population, unless the clergy can contribute to the relief of bodily as well as spiritual wants. The parson, like the missionary, must acquire a spiritual influence, by showing his superior knowledge and judgment in relation to matters affecting the daily life, and lying within the comprehension and observation of the people.

I have stated that the intervention of the clergyman as an adviser is more likely to be sought by a rural than an urban community; and it is equally certain that the mediation of the clergyman presents exceptional difficulties in the case of differences arising between the farmers and the labourers in their employ. The clergyman in the country is mainly dependent on the landed proprietors and the well-to-do farmers for those voluntary contributions which enable him to carry on the work of education, to relieve the wants of the poor, to maintain the fabric of the Church, and to conduct the services with appropriate order and dignity. To make a stand against the prejudices or the interests of his most powerful friends is a task which may require, on the part of the minister of a country parish, a high degree of moral courage, and possibly of self-sacrifice. On the other hand, if the clergyman should unconsciously permit his judgment to be biassed by the desire to conciliate those from whom it is disadvantageous to differ, and if he should accordingly fail to do justice to the legitimate claims of the poorer members of his flock, he will no longer retain that influence over their affections without which it is impossible to carry forward his more important and essential work. Great difficulties of this kind have been of late experienced in Norfolk and Suffolk, and, as I am informed, in parts of Oxfordshire also; localities which I mention more particularly, because I have received information from clerical friends in those districts, relating what has passed in their own parishes, which will serve to illustrate the state of affairs elsewhere. In Norfolk the agitation

among the labourers for an increase in their wages has been opposed by many among the local clergy. I am unable to offer an opinion as to the claims of the agricultural labourers in that part of England to an increase of pay; but this is certain, that the *ex parte* statements of a band of agitators had excited high expectations among labourers, and that they experienced the most bitter disappointment whenever they found the clergy uniting with the farmers to oppose their demands.

It cannot be doubted that much harm may be done by reckless misrepresentations, addressed to an unthinking and imperfectly instructed auditory. The same easy means of winning the popular favour has been adopted by the demagogues of every age. Shakespeare, in his *Henry the Sixth*, has drawn a picture of Jack Cade, which might pass for the portrait of many of his successors in the nineteenth century:—

'Tom King,' Cade is represented to have said, 'is brave, and vows reformation. There shall be in England seven halfpenny loaves sold for one penny; the three hooped pot shall have ten hoops; and I will make it felony to drink small beer. All the realm shall be in cambric, and in Cheapside shall my palfrey go to grass. And when I am king, as king I will be—'

All.—'God save your Majesty!'

Cade.—'I thank you, good people: there shall be no more money; all shall eat and drink on my score; and I will apparel you all in my livery, that they may agree like brothers, and worship me, their lord.'

Agitation, however, among the labouring class should not in all cases be discouraged. Previous to

the Education Act of 1870, and before a stimulus had been given to the dormant energy of the agricultural labourers by the exhortations of Mr. Arch, the population of our more secluded districts were in a lamentable condition of apathy and dependence.

If, then, it be the duty of the Church to offer discriminating advice to the poor upon the labour question, where are the clergy to look for a sure foundation, upon which they may venture to justify an authoritative opinion on the merits of a controversy which, in a practical point of view, is of the highest importance? It is the duty of the clergy to insist on a large and generous view of the claims of the working man on the one hand, and, on the other, to encourage the poor to live contented with the lot in which by Providence they have been placed. The latter duty—the duty of submission—it is not at all times easy to perform; and it is most difficult for those who are unable to appreciate the reasons why it is essentially necessary. It is, nevertheless, a law to which every individual must submit. All men cannot be leaders, and few among the ambitious critics of those in authority know anything of the responsibilities and the difficulties of their rulers. This painful lesson of subordination it is the duty of the Church to inculcate, and in the midst of the vague aspirations which influence the masses of the working people in our day, many will be found to rebel against such teaching. 'Socrates,' says Lord Bolingbroke, 'used to say that, although no man undertakes a trade he has not learned, even the meanest; yet everyone thinks himself qualified for the hardest of all trades—

that of government. He said that upon the experience he had in Greece. He would not change his opinion if he lived now in Britain.' That which is true of political government is not less true of industrial and commercial organisation. The guidance of authority and superior judgment are essential, where the skill and physical powers of vast numbers of men are to be combined for the purposes of manufacturing production, or for the execution of the great conceptions of the architect or the engineer. Agricultural operations are generally conducted on a humbler scale; but here, too, the directing mind and the resources of capital are equally essential to success.

The advisers of the rural poor in matters spiritual must not only teach them the duty of contentment and subordination, but must also be prepared to offer them counsel where they are seeking to improve their worldly position. The last may appear to present insurmountable difficulties, and a task very delicate and hazardous it assuredly is. Fortunately for the clergy, the general principles which determine the rate of wages are amongst the most clearly-established doctrines in the science of political economy. The accuracy of the rules laid down by Adam Smith has been confirmed by the long and wide experience of the largest employers of free labour; and the able writers who have followed their great teacher into the same field of inquiry have, in the main, repeated his doctrines, their own contributions to the literature of the subject consisting chiefly of additional illustrations. Two leading truths in relation to the question I will

venture on this occasion to enunciate. I. The rate of wages cannot be permanently and materially influenced by artificial means. The restrictions imposed by trade combinations on the free energies of the working men may, perhaps, do some harm to their class, but cannot in the long run do them any good. II. The other axiom to which I allude is not less important, namely, that the cost of production cannot be determined by the nominal rate of wages. You may have very low wages and very dear production, as in Russia. Indeed, it may be affirmed as a general rule, that underpaid labour is always the most expensive. I cannot, therefore, share the views of those who are alarmed for the future of England as an industrial country, solely because there is a universal tendency to an increase of wages. On moral and social grounds, I am glad that the standard of living adopted by the working classes should be raised; and I believe that better machinery, a higher intelligence, improved skill, and greater diligence during the hours devoted to manual labour, will effectually counteract the tendency of higher wages to increase the cost of production. The working people have the control of this question in their own hands. By higher skill or greater diligence they may increase their wages, without adding to the cost of production. Every day we see new evidences to prove that it is more economical to give to labour a liberal reward; to employ fewer men at higher wages, rather than a greater number of workmen at a lower rate of wages. Every individual is better off, and the total expenditure on labour is reduced in amount.

It must be the earnest desire of those, to whom is committed the spiritual instruction of the people, to protect the masses of our labouring poor from the pressure of misery and want. A struggling and necessitous peasantry will be too much absorbed in the hard struggle for existence to receive or to understand the spiritual exhortations of their pastors. The general principles of the science of political economy cannot be applied to special and local circumstances, unless the progress of trade, the modification in prices, and the comparative cost of labour in other places, be from time to time ascertained. It is accordingly essential to a complete understanding of the problems which may arise in connection with the demand for increased wages, that those to whom the working people are disposed to look for advice should carefully watch the course of events. The *Economist* must be studied as well as the 'Concordance.' A technical knowledge of manufacturing industry is not required in order to form an opinion as to the validity of a claim for an advance of wages. The collation of the facts adduced by the contending parties, and the formation of a sound judgment on the merits of the question at issue, require a fair and impartial mind, rather than special technical experience. Most valuable services have been rendered by Mr. Rupert Kettle, a County Court judge, and a gentleman without any practical knowledge of manufacturing industry, in composing the differences between masters and workmen in the coal and iron trades. There is no reason why the same work of practical beneficence should not have been performed by a

clergyman. It may be that these inquiries, from their very nature, are far removed from the sphere of thought in which most clergymen are engaged; and it would be unreasonable to expect that the remarkable capacity for apprehending these subjects, displayed by Mr. Kettle, should be found in every minister of the Church. On the other hand, in so large a profession there must be men of the most diverse qualifications. Some may be specially gifted for contemplation, others for preaching, others for practical beneficence in the ordinary affairs of the world. Each of these has his own work to do. Only let it be recognised that a clergyman should not necessarily be limited to the pulpit, the study, and the schoolroom; and that occasions may arise when he will be truly in his place when occupied in assisting his people in the solution of the practical difficulties which occur in daily life. The advisers of the working man, if it at all times clearly appear that their counsel rests on a sound basis, will have no cause to fear that they will lose their influence by giving a verdict against the workmen. Mr. Thomas Hughes and Mr. Kettle have not ceased to be trusted counsellors; because they have been strictly impartial. The labourers of England well know that—

> Thrice is he armed that hath his quarrel just,
> And he but naked, though locked up in steel,
> Whose conscience with injustice is corrupted.

I pass from these observations on trade disputes, to say a few words on some other points, which lie more particularly within the sphere of the clergy. The

times in which we live are remarkable for the general development of a spirit of free inquiry into the doctrines of religion. Some of the most trusted leaders of our working men have openly avowed their disbelief in the truths of Christianity. It is impossible to speak without a personal respect of Mr. John Stuart Mill. He dedicated a life of unceasing labour to the improvement of the social and mental condition of mankind. Such a man cannot fail to command a great influence over opinion. But when a man of so much influence leaves to the world, as his last will and testament, an avowal of infidelity, it is the duty of the clergy to take care that the foundations of religious belief are not shaken by such a declaration, especially among that class of persons who are ready to accept any creed which has the fascination of novelty, without taking the trouble, or indeed commanding the opportunity, of making an independent examination of the grounds, upon which they are invited to set at nought the most precious inheritance which they have received from their fathers.

There is another lesson to be learned, more especially by those on whom has been bestowed the blessing of means. Say what we may on the political economy of the subject, however strongly we may justify on legal and political grounds the strenuous defence of the rights of property, to the poor and needy who cannot understand political economy, legal principles, nor politics, there must be an apparent injustice in the unequal distribution of wealth among the various classes of society. The wealthy can only make their advantages tolerable to the poor, by freely applying their resources

to purposes which are beneficial to society at large. The most persuasive teachers of socialism are those whose wealth is employed in the gratification of vicious tastes, in sensual indulgence, in selfish pleasure, or in personal ostentation. The vindication of the rights of property can only be successfully undertaken by those who follow that wise opinion of Lord Bolingbroke, that 'a life dedicated to the service of our country admits the full use, and no life should admit the abuse, of pleasures; the least are consistent with a constant discharge of our public duty, the greatest arise from it.'

LECTURE VI.

CO-OPERATIVE PRODUCTION.

ADDRESS TO THE ANNUAL CONFERENCE OF THE CO-OPERATIVE SOCIETIES, HELD AT HALIFAX, APRIL 6, 1874.

BEFORE I enter upon the main topics of my address, I desire to express my grateful thanks to the Committee of the Co-operative Congress Board for the invitation which I have had the honour to receive. Such an opportunity as that which I enjoy to-day, of exchanging ideas with the leading members of the co-operative societies, is the more welcome, because it cannot frequently occur.

Here I may appropriately observe that the absence of large employers of labour on occasions such as this should not be construed as if it implied any want of interest in your proceedings, or unwillingness to take trouble to promote the advancement of the manufacturing population. The true interpretation is to be found in the exceeding pressure, to which, in the keen competition of industry and commerce in the present day, the man of business is inevitably subjected. Every moment of his time, all his powers bodily and mental, are exhausted in the race; and the task of aiding and encouraging the self-helping efforts of the people, a task in which I venture to say most employers would

if they could, most gladly take their part, must of necessity remain in the hands of their more fortunate brethren, who have leisure to devote to social and philanthropic work.

It is scarcely necessary to insist on the vast development of our co-operative organisation. The tabular return, recently presented to Parliament on the motion of Mr. Morrison, one of the most earnest and judicious friends of co-operation, sets forth the statistical result in a most remarkable enumeration. It is generally dull work to listen to figures: but figures, when they represent facts, have an oratorical power of their own which is often more striking and persuasive than the richest eloquence. If I am to narrate to you in a compendious form the story of your past achievements, I cannot accomplish my task without the aid of arithmetic. The number of Co-operative Societies in England and Wales is 746: the number of members, 300,587; of whom 60,000 were admitted, and 32,000 withdrew in 1872. The share capital amounted at the end of 1872 to 2,784,000*l.*, and sums of 10,176,000*l.* were paid, and 11,379,000*l.* were received during the year in cash for goods. The disposable net profit realised from all sources amounted to 807,748*l.*

The enormous sums I have enumerated give proof that the principle of Co-operation, in its application to the Distribution of Commodities among consumers, is convenient and practicable, and effects a considerable saving of expense.

It cannot, therefore, be doubted that the co-operative system tends to diminish the business of that large

class who earn their livelihood in the retail trade of the country. As the co-operative system is more and more generally adopted, many, who might have earned an income as shopkeepers, must seek out another career. In the transition stage some suffering may be experienced by individuals. I trust, however, that changes will proceed gradually; and that there may be ample time for the absorption into other channels of the labour and capital displaced by co operation.

Further, it is to be observed that the retailers may, by a better system of trading, find themselves able to afford their customers the same advantages which they now receive at the co-operative stores. Retail prices have been enhanced by the unwholesome system of long credits. The business of the individual retailer has generally been so small, that a livelihood could be earned only by making a high profit on a limited number of transactions. If the retailer's business were concentrated in fewer hands, and the credit system were abolished, if the sound commercial principle were adopted of looking for a large aggregate gain by means of small profits but quick returns, and by making a small percentage on a large turnover, the public might find that the exceptional advantages it now offers need not be confined to the co-operative system.

The main purpose of the friends of the co-operative movement is not so much to concentrate the whole business of supplying the public at a few stores, under the control of that special organisation which they direct, as to secure to the great body of consumers the

means of obtaining the necessaries of life at the lowest practicable cost, and of the best quality. So long as this object is attained, it matters not whether it be accomplished through the co-operative associations, or by the agency of the ordinary retailer.

The management of a Co-operative Store is a task not without difficulties. The members who withdrew from these societies in 1872—the returns for 1873 are not completed—were half as many in number as those who joined. The retailers may, therefore, reasonably infer that they are competing with rivals, who have serious problems to solve. Instead, therefore, of idly complaining, they must meet the competition of the Co-operative Stores by an improved organisation of their own trade.

If they succeed in holding their own, as I confidently anticipate that they will, the community will be the gainers, and there can be no other feeling but one of good-will for those, who are competing with each other, to promote the advantage of the general body of consumers.

I pass from co-operative distribution to Co-operative Production. The equitable distribution of profits between labour, capital, and the inventive faculty, which creates, and the commercial and organising faculty, which conducts a business, is the most important, as it is undoubtedly one of the most difficult of the social problems of our age.

There are doubtless many persons in this hall, who think that, in the actual organisation of productive industry, there is a disproportionate assignment of profits

to capital. As instances of individual success are multiplied, so this conviction of the injustice of the existing order of things in the commercial world will be strengthened and confirmed. Whatever political economy may teach, however easy it may be to explain the operations of trade, between wealth and necessity there still exists a contrast, which mingles with the possession of riches a dark alloy, and cannot but make the burden of the poor man harder and heavier to bear. We may be able to prove that the capital of the large capitalist ordinarily receives but a moderate return, and indeed is freely employed on easier terms than a needy man would exact; but it is not less true that, measured by the strict necessities of life, an accumulation of wealth must, under all circumstances, be a superfluity. The sentiments, so naturally aroused by the spectacle of this ungracious contrast between wealth and poverty have found an illustrious, though not unprejudiced exponent in the poet Wordsworth:—

> Slaves cannot breathe in England—yet that boast
> Is but a mockery! when from coast to coast,
> Though fettered slaves be none, her floors and soil
> Groan underneath a weight of slavish toil,
> For the poor many, measured out by rules
> Fetched with cupidity from heartless schools,
> That to an idol, falsely called 'The Wealth
> Of Nations,' sacrifice a people's health,
> Body and mind and soul; a thirst so keen
> Is ever urging on the vast machine
> Of sleepless Labour, 'mid whose dizzy wheels
> The power least prized is that which thinks and feels.

Socialism is the protest of labour against the un-

equal distribution of the profits of production; but the system of absolute equality is against the law of nature. Whatever poets, sentimentalists, and agitators may say, there cannot be equality in a society composed of individuals unequally endowed in knowledge, natural aptitude, and in physical and mental power. But while there cannot be equality there must be justice.

Viewing the subject in the light indicated in these observations, I earnestly wish success to the experiment of adapting the co-operative principle to productive industry. In a co-operative mill, or workshop, or farm, the producers unite the double functions of capital and labour. The handicraftsman sits in judgment on the claims of the capital provided by his own thrift and past labours, and while he is not likely to appropriate an inadequate rate of interest to a fund obtained from such a source, he cannot, at the same time, apportion too much to capital, without doing an injustice to himself in another capacity.

If it be practically developed on an extensive scale, co-operative production ought to save many disputes concerning the rates of wages. In the co-operative establishments there cannot, in the nature of things, be any contention between a body of workmen and an individual, whom they regard with unfriendly eyes as a selfish monopolist. Nor will the benefits be confined to co-operative establishments alone. They will ameliorate the relations between employers and employed in cases where, as it commonly happens, the conflicting interests of capital and labour are represented by different individuals. All contentions on the ques-

tion of wages will be more easily adjusted, when the capitalist is enabled to refer the labourer to the rates of wages prevailing in co-operative establishments, where they have been determined, not by a single individual, suspected of being without sympathy for the labourer, but by those very men who, in the capacity of workmen, become the earners of wages, fixed and paid by themselves.

The desideratum in all labour disputes is a standard, set up by an impartial tribunal, by which it may readily be decided what constitutes a fair rate of wages. When co-operative production has been introduced into all branches of industry successfully and on a sufficiently extensive scale, we shall then have the universal gauge or measure of the workman's rightful claims. From the day when the workman will take his part in the deliberations which accord to capital its fair rate of interest, and to the wage-earner his due; from the day when the workman may count with certainty on a just and equal participation in the profits of every enterprise in which he is engaged, in proportion to his merits; we may venture to hope that strikes will cease, and that workmen will be content to devote themselves to the successful prosecution of the industry in which they find their employment. If it should appear an exaggeration of the powers of human nature to adopt the principles on which Fourier insisted, and to regard all labour as a pleasure; it is possible to conceive conditions in which labour would appear more alluring and attractive than hitherto. The labourer might have more satisfaction in working

under the direction of persons selected by himself, than he now experiences under the authority of an employer, upon whom he is entirely dependent as the distributor of wages.

It has been asserted by prominent advocates of the labour interest that among capitalists there is a universal desire to acquire wealth, and but little disposition to pay due regard to the rights of others. There may be cases in which these allegations are true, but they do not correctly represent the general tone and temper of the employers of this country, among whom a higher spirit prevails than some ill-natured critics are ready to allow.

In France and Germany similar representations have gained many credulous converts. In those countries, and especially in the former, there is much hostility between masters and men. Even when kind and considerate acts are done, they are regarded with suspicion, and are not accepted as the fruits of a generous impulse, or as meriting grateful recognition.

Happily there is no such hostility of class and class in this country. That it does not exist is conclusively proved by the support given by multitudes of working men at the recent general election to Conservative candidates, who, among other claims to favour, are supposed to be the chosen defenders of the rights of property.

One thing may unhesitatingly be affirmed, that the disposition to be liberal towards workmen is developed, as a general rule, in proportion to the extent of the business and the capital of the employer; that there is

the most intense love of gain among certain smaller employers; and that some of the least generous members of the class are those who have most recently raised themselves from the capacity of workmen to that of employers. This is easily explained. Those who have been nursed in ease and security from care, may well afford to deal in a more generous mood with their dependants.

It is not well that capital should be favoured at the expense of labour, nor yet would it be for the advantage of the working class to diminish the motives to accumulate that fund which, in truth, is the only source whereby enterprise can be encouraged, and employment created. The ordinary interest upon capital in England is lower than in any other civilised country. The temptations to English holders of capital to invest elsewhere are already sufficiently great. All the countries of Europe, and, to a yet greater extent, the United States, are constantly bidding for the use of our resources. Capital employed in agriculture and railway enterprise in the United States yields a return at least one-third higher than the like investments in England; and I should accordingly view with considerable anxiety any serious depreciation of our current rate of interest.

It has been alleged that in England the class of persons is gradually being diminished, who without large means enjoy the advantage of holding a position of independence. Theirs is an order essential in a happily constituted society, as the connecting link between the rich and poor. They are defenders of the

rights of property, while their modest and frugal households present no painful contrasts to the condition of the less independent wage-earners among whom they live. It is said that the monopoly of capital is gradually leading to the extinction of the small farmers and the small shopkeepers, and that there is a gloomy prospect of a society, in which a painful gulf will separate the privileged few from the mass of the community. What does the recent census teach on this subject? It is true that the number of large farms is increasing, and the acreage of farms under one hundred acres diminishing, but the process of change is slow. The number of farms of 200 acres and upwards, in 1851 and 1871, is within a fraction the same; and it is a most remarkable circumstance that, while the average size of the farms in seventeen representative counties of England was ascertained to be 152 acres, the average size of the farms of the United States, according to the census of 1870, was 154 acres.

There is in the United States a boundless territory available for agricultural occupations, and the laws offer every facility for the purchase and transfer of land. We may therefore safely infer that, as there is a remarkable coincidence in point of size between the farms of England and the United States, the acreage has in each case been determined by considerations of convenience. If smaller holdings had been found to offer equal advantages, no obstacle would have been raised on the part of the landowners to a more minute subdivision.

The average size of farms has been determined by long experience, and has been settled as between landlord and tenant by a countless number of independent negotiations, each party to the bargain looking mainly to his own interests in the transactions. Hence, so far at least as agriculture is concerned, there appear no sufficient grounds for the assertion that there are impediments here—which are not found elsewhere—to the existence of a class of farmers cultivating small holdings, but not furnished with capital enough to do justice to a large extent of land.

No doubt it would be a benefit to society that capital should be distributed among a greater number of individuals; and it is because co-operative production would tend to promote that result that its development is so earnestly to be desired.

Let me not, however, be misunderstood. There is a power for good in large accumulations of capital in the hands of a single individual, if he be steadfastly determined to make a right use of his resources. It is by such men that some of the most judicious operations have been carried out in this country for developing the mineral resources of an untried district, for the advancement of agriculture by costly drainage, for the comfort of the poor by the erection of convenient dwelling-houses, for the improvement of our towns and cities by the destruction of unwholesome habitations and the erection of dwellings furnished with all the contrivances of modern sanitary science, and for the extension of the boon of railway communication into thinly-peopled districts. Works such as these, however

profitable in the long run, generally involve a protracted lock-up of capital; and the ordinary investor, who cannot afford to lose for a long period the interest upon a comparatively slender capital, is slow to undertake them.

'Apart, however, from such exceptional cases, the argument in favour of a more equal participation in profits may be admitted as theoretically incontrovertible. The co-operative system of production is a means to that consummation which is so devoutly to be wished. At the same time, while highly commending the system in principle, it cannot be denied that in its practical application there are grave difficulties.

In deliberation the opinions of many counsellors serve to establish sound conclusions in the mind; but when you proceed to carry out a decision thus arrived at, when you have to govern and administer, all experience proves the infinite superiority of individual over corporate management. 'There be three points of business,' says Lord Bacon—'the preparation, the debate or examination, and the perfection. Whereof, if you look for dispatch, let the middle only be the work of many, and the first and last the work of few.'

The following opinion of Mr. Erastus Bigelow, of Massachusetts, quoted by Mr. Harris Gastrell, may be cited in support of the view I have ventured to express:—

'The Corporation system has been a serious hindrance to the proper diversification of our manu-

factures. . . . . I will point out briefly some of the disadvantages. When men who are occupied with other pursuits decide to invest capital in manufacturing corporations it is usually done on grounds of general confidence. They invest, because others are investing. They believe, without exactly knowing why, that such investments are safe, and will be profitable; or they follow the lead of some friend, in whose knowledge and judgment they confide. They do not act on their own acquaintance with the nature and requirements of the business; for such an acquaintance can be made only by careful investigation or actual experience. The natural consequence of all this is that capital for the extension of old or the projection of new manufacturing enterprises can seldom be obtained at those times when it is most needed and might most profitably be employed. This single feature of the system is fatal to any true and healthy progress under it.

'The capital thus raised must be expended. An agent is employed and enters on his work. Those capitalists who have invested under the stimulus of high profits are impatient for results, and urge him to hasty action on ill-considered plans. A sudden and unnatural demand for operatives is thus created, raising the rate of wages and greatly enhancing the cost of goods. Lastly, unity of purpose and action, without which no business can be successfully prosecuted, can hardly be expected under the divided responsibilities of a large corporate organisation.'

A ready means of applying the principle of limited

liability to all descriptions of business was created by the Joint Stock Companies Act of 1862. That enactment gave great facilities, for the sale of their property to Joint Stock Companies, to men at the head of large concerns, who were tired of hard work, and anxious to hand down to their families an inheritance, secured from the risks and fluctuations of trade.

While there were many seeking to exchange the wear and tear of business for the comparatively easy life of the country gentleman, there was a large body of inexperienced and sanguine investors, who had deluded themselves with the belief that it was possible to conduct the most intricate operations of industry successfully, without experience and without that constant personal devotion to administrative details which the individual manufacturers whose property they had purchased had found it essential to bestow.

It is well known that in numerous instances the purchasers have sustained a serious loss. In some cases the prices paid have been excessive, and the failure has resulted from the exaggeration of the capital account. In other and more numerous cases the explanation is to be found in the imperfect control exercised by a board of Directors, assisted by a salaried manager, as compared with the administration of the individual employers.

Even in the choice of an agent, representative, or manager, a private individual has advantages over a board. Take the case of a railway contractor. The contracts for a long line of railway are subdivided, for the purposes of the supervision of the work, into sections rarely exceeding eight to ten miles in length. If the

works are unusually heavy, the sections are shorter in proportion. A sub-agent is placed in charge of each section, and an experienced agent has the general direction of the whole contract. The principal contractor for the undertaking, by paying frequent visits of inspection, has opportunities of becoming acquainted with every sub-agent in his employ. He observes the progress made on his section. He can test his capability of dealing with every kind of practical engineering difficulty, by moving him from railway to railway, and putting him in charge of work in districts totally dissimilar in their physical character and resources. Gradually those employed in a subordinate capacity have an opportunity of showing their powers; and yet while there is ample scope for individual merit, the supervision of the agent, having the general charge, will prevent the mistakes of a subordinate from producing very serious consequences. Thus, with the lapse of time, and without any grave risk of loss, the contractor may form an opinion as to who are his most trustworthy sub-agents, and can select principal agents from among their number with confidence; because their powers will have been thoroughly tested in a subordinate capacity. Here it will be obvious that long experience and continuity of management are essential. A board will make appointments upon the faith of testimonials. The private individual will trust to personal observation.

Again, administrative success depends upon the knowledge and management of details. The art of organising large bodies of workmen will only be ob-

tained by previous experience on a smaller scale. The general supervision of subordinates will be most effectually exercised by one, who, by close observation on the spot, whether in the tunnel, the workshop, or the factory, has learned how to discharge in his own person the duties he has delegated to others. The greatest commanders and administrators have ever been consummate masters of detail. Napoleon's arrangements for the marches undertaken by his vast armies are admirable for the forethought and the care wisely bestowed upon details. A council or a board, only occasionally meeting, cannot manage a business; and, unless efficiently represented by their officers and servants, they are practically powerless. In a commercial point of view, great profits in productive industry are generally obtained by infinite small economies. Directors in a board-room can effect nothing in this way. Every economy of expenditure must be suggested by close and constant observation of the processes by which materials are prepared, and labour applied to the execution of the work.

In the organisation of co-operative production it is essential to secure the services of individuals competent to take the general management. The manual operations will be skilfully and probably more diligently performed in a co-operative establishment. The personal interests of the workmen will be so directly advanced by their application and perseverance, that they will naturally work hard. But their best efforts will fail to ensure a satisfactory result, unless the general organisation is perfect also.

This organising faculty is a rare gift, and it must be combined with long experience and excellent judgment, or the commercial result cannot be satisfactory. Many there are who possess, in an eminent degree, inventive skill. Others have powers of persuasive speech, which enable them for a time to command great influence in financial circles. When, however, they come to deal with practical questions, they fail. Mechanical and scientific ability will not command success unless united with prudence and tact. High diplomatic qualities are often required in the conduct of negotiations, both with the trade out of doors and with the workmen employed. Above all, there must be integrity and high-minded resolution to withstand the temptations that come from the love of money, and operate so strongly on the minds of men of slender means and great ambition.

We have the most conclusive evidence that the administrative powers, of which I speak, are as rare as they are essential, in the handsome salaries which men possessing such qualifications often obtain, not only as managers of large joint-stock companies, where technical and practical experience is indispensable to supply what is wanting in a board of directors, appointed to manage a business of which they have no knowledge, but in the employ of private firms. When shall we find co-operative shareholders ready to give 5,000*l.* a year for a competent manager? And yet the sum I have named is sometimes readily paid by private employers to an able lieutenant.

It is because there has been in co-operative estab-

lishments a reluctance to pay what is necessary to enlist first-rate ability in the management of the business, that their operations have hitherto been attended with very partial success. I believe that only personal experience of the difficulties of the task would induce a body of workmen to reserve from their earnings a sum sufficient to secure the services of competent leaders.

I would, therefore, earnestly dissuade those interested in co-operative production from attempting to commence on a large scale a business difficult to manage. I would suggest more practicable as well as more prudent policy. A moderate capital is easily obtained. Large funds are not rapidly procured. Where only a few hands are engaged, the government may be conducted on a purely democratic basis. Where the energies of a multitude are to be combined, there must be an enlightened despotism.

In the case of a co-operative establishment, the persons entrusted with plenary powers must, as a matter of course, be subject to the control of the contributors of the capital; but their control should be exercised only at stated, though sufficiently frequent, intervals. It was rightly pointed out by Mr. Morrison, in the debates at the last conference of Co-operative Societies, that, without the concentration of management among a limited number of persons, it would be impossible to preserve the unity of tradition and administration, which are essential to establish the reputation of a factory or workshop, and to secure for the articles therein produced, the high prices consumers are always ready to pay for goods of undoubted quality.

The appointment of the manager by popular election,—the electors being the hand workers, who are to serve under the chief, selected by themselves,—is quite compatible with continuity of management. In a trading concern the acting partner or manager, who has personal control, is rarely obtained by hereditary succession. It is seldom that a man of commercial genius has a worthy successor in his son. Hence it may be anticipated that the elective principle will be at least as well calculated as the hereditary to protect the workmen from the disasters which must inevitably be caused by incapacity in the management.

Co-operative Societies of production would doubtless have been established far more rapidly, unless there had been formidable difficulties to be surmounted. The most recent report shows that the number of these societies may almost be counted on the fingers. Though some of the experiments actually tried have been successful, the failures have been more numerous than the successes. The Paisley Manufacturing Society, the Hebden Bridge Fustian Society, the Eccles Quilt Manufacturing Society, the Lurgan Damask Manufacturing Society, are examples of co-operative production successfully conducted; but they are on a small scale, and probably their success is partly attributable to the wisdom of the promoters in not attempting more ambitious undertakings. The Printing Society of Manchester is a greater effort, and it is highly flourishing. It is possible that the business is of a kind which depends less on the administrative ability of the manager than on the individual exertions of the workmen.

The Co-operative Printing Society recently established in London has however failed to command a remunerative business.

The most important experiment in co-operative production hitherto attempted in this country is that of the Ouseburn Engine Works. But this Company has sustained a severe loss; and, strange to say, there has been a strike for higher wages on the part of the workmen employed in one department of the concern. The occurrence of a strike in a co-operative establishment proves the difficulty, though not the impossibility, of conducting an undertaking on a democratic system, when you have to deal with many classes of workmen, possessing different and unequal qualifications.

The adjustment of the rates of wages in a case in which some members of the co-operative body must be paid at considerably higher rates than others, requires on the part of the latter no common measure of self-denial. It is sometimes hard to recognise the superior merits of others, even when we have the means of forming an independent opinion on their claims; but when workmen, brought up in one trade, are required to assign much higher wages to artisans practising another trade, of the exact nature and difficulty of which they have no experience, they are naturally prone to doubt whether a sufficient reason exists to justify a distinction, inevitably involving a personal loss to themselves.

Thus, the inequality in the earnings of different trades, and of the same trades in different countries, is a common cause of dissatisfaction among those who

receive the least liberal rates of pay. It does not follow that the complaints are reasonable. Where there are no special circumstances to redress the balance, such an inequality ought to be removed; but in most cases it will be found that the condition of those who are in receipt of lower wages, is more enviable than that of their rivals in other respects. Compare the hardy peasant with the tired denizen of a dismal alley in a great city, to whom the returning spring brings with it none of the glad sights and sounds which surround the country village as with a sweet enchantment. The rustic labourer has a garden gay with flowers. The leafy shades protect him from the noon-tide glare, and his ears are soothed by the melodious minstrelsy of Nature:

> The moan of doves in immemorial elms,
> And murmuring of innumerable bees.

His labours are performed in the free fresh air. They are varied and interesting. They tend to invigorate rather than to exhaust his physical powers. The term of his life is longer. His health is more easily preserved.

The charms of rural life, as sung by the poet, and painted by the brush of a Linnell or a Birket Foster, are to some natures inexhaustible. The golden corn, the purple heather, the sunny foreground, and the mellow distance,—how great a contrast between a landscape so composed, and the dull red walls and close canopy of smoke, in which the factory operative is confined! Can any difference in the rate of wages fully compensate for the privations that he suffers?

To return, however, to the Ouseburn Company, the causes of the early losses were frankly and ably explained by Dr. Rutherford in his speech delivered on the occasion of the visit of this congress to the works, at their last conference. Orders had been booked at too low a price. The manager, by whom the directors were advised, was much at fault. The head of the undertaking should have been, as Dr. Rutherford so justly urged, a practical engineer, as well as a philanthropist. To secure the services of a competent manager the remuneration required should have been measured, not by a few hundred, but by a few thousand pounds. The history of the Ouseburn works is an illustration of the principles already laid down. The early failure is attributable to the want of that experience and technical and practical knowledge, which can only be supplied by the appointment of a highly qualified engineer. When such a man has been found, all will go well with the Ouseburn Company.

There has been a Quixotic idea among co-operators that a percentage on the price charged to customers should be returned. The policy of competing for business by underbidding rivals, placed in exactly the same relative position, in regard to the cost of materials and labour, should be followed with the greatest caution. Keen competition in every department of our trade has already brought down profits to the lowest point. The aim of the co-operators should be to follow the example of those sagacious and experienced men of business, who always insist on full prices for their work, and endeavour to protect themselves against competition by

superior excellence in the quality of their productions.

The valuable reports of Her Majesty's Secretaries of Legation describe many successful applications of the co-operative principle which may prove encouraging to English enterprise.

It is stated by Mr. Ford that the Executive Committee of the Tailors' Union in New York, on notifying the cessation of a strike, in which the trade had been engaged in 1869, declared that their policy would thenceforward be to abandon the system of strikes, and to fight with the stronger weapon of co-operation.

The co-operative principle has been adopted by those strange religious sects, the Mormons, Shakers, Economists, and Perfectionists. However we may differ from their creed, it must be admitted that they have attained to great success in the organisation of labour. The Mormons at Salt Lake City have transformed 'a wilderness into a garden,' and I can speak from personal knowledge when I say that the Shakers are excellent farmers.

Co-operative foundries have been established in New York and Massachusetts. There is an Iron Foundry at Troy, in New York, which was started in May 1866, with a capital of 2,700*l.* paid-up. The shares were fixed at 20*l.*, and limited in number to 2,000. In the first year thirty-two men, in the second seventy-five, in 1869 eighty-five men were employed in the works. A dividend of 10 per cent. was made in the first year, and 30 per cent. more was paid on labour. The second year the dividends on stock and

labour amounted to 89 per cent. In 1869 they reached 100 per cent. The most skilled trades earn, owing to their steady employment, 35 per cent. more than the same classes of workmen would earn at similar wages in any private foundry. Great economy has been effected in the use of materials, and the strictest discipline is enforced. Up to the date of Mr. Ford's report, all the profits due to individuals had been paid to them in shares, with the view of applying the additional capital to the enlargement of the works.

The co-operative movement, thus happily begun, has been followed up with energy and spirit. Mr. Archibald, our Consul-General in New York, writing in 1872, says: 'During the past year, co-operative concerns have been organised in several departments of business, but with far greater success in industrial than in commercial matters. The Working Men's Manufacturing Company, with a capital of 25,000*l.*, has been formed at Emmaus. It is to be conducted on the co-operative principle, and will erect extensive works, including a foundry, forge, and two machine shops, employing at the commencement about 200 hands.'

In Austria, the majority of the printers, though in theory advocates of the views of Lassalle in favour of Government workshops, in practice have adopted the sound doctrine inculcated by Schultse Delitsch, the eminent German economist, that every man should trust to self-help, rather than place his dependence on the Government. The printers of Vienna have established a co-operative press; and Lord Lytton states in his

report that 1,500 printers were, in 1869, negotiating for the purchase of another office.

Mr. Jocelyn, in his report of 1869, refers to the progress of co-operative production in Sweden, and says that this most difficult form of labour organisation has been particularly successful in that country. He attributes this fortunate result to a spirit of independence highly honourable to the Swedish workman. They will willingly risk their savings for the sake of seizing an opportunity of rising from a dependent position to the freedom of co-operative industry. It has been found in Sweden that the smaller undertakings of this nature are the most prosperous. Where, on the other hand, many are associated upon an equal footing for the promotion of manufactures requiring unusual skill, there is great danger of the whole becoming *de facto* the property of a few of the original founders, while the rest sink back into the condition of simple workmen under their command.

While the efforts to establish co-operative production in this country have not thus far been attended with a large measure of success, the importance of the principle at stake is so great, that I should deprecate most earnestly the abandonment of further attempts in the same direction. The wiser course will be to avoid, as it has been already suggested, commencing undertakings on a large scale. When the business is of a kind that cannot be carried out advantageously on a moderate footing, the co-operative principle should be applied to the execution of sub-contracts for portions of the work, to the supply of a part of a large order, or

to the execution of a single process in a complicated manufacture.

When a railway contract has been taken, the principal contractor usually subdivides the works, and lets them out to sub-contractors. On a long line of railway every cutting, bridge, tunnel, embankment, and station is executed by one or more separate contractors; and thus the co-operative system may readily be applied to the construction of every section of the largest undertaking, after it has been sufficiently subdivided. The same remarks apply to shipbuilding and many other branches of industry, where the subdivision of the work will give ample scope for the application of the co-operative system, combined and organised under an employer of superior administrative skill and large resources at the fountain-head.

It may be interesting to men, who are engaged in a great effort to organise a new and better system for the application of capital and labour to production, to hear some details of the methods adopted by the English contractors, who have been engaged in the execution of great railway contracts both at home and abroad. In the conduct of these works, the main object in view has been to give to the workmen a personal interest in the performance of an adequate quantity of work, in return for the wages received. In the case of the contractor, it was especially important to attain this object by making it the interest of the labourer to do his fair share of work, rather than by placing reliance on a close personal inspection of his conduct. With the development of railway enterprise, the practice was

adopted of inviting English contractors with competent resources to undertake railway and other works, not only in their own country, but in every quarter of the Globe. The difficulties of supervision of necessity increased with the enlarged area of their operations, and it was essential to devise some plan by which it should, if possible, be made an advantage to every individual concerned to perform his share of the common task to the best of his ability.

Thus the system of sub-contract and piecework, originally adopted by the pioneers of railway construction, was extended to every operation where it was possible to apply it. The general character of the arrangements may perhaps be best explained by the selection of an example taken from actual practice. On the contract for part of the London and South-Western Railway, between Basingstoke and Winchester, there was an unusual proportion of excavation to make, amounting to some $3\frac{1}{4}$ millions of cubic yards on a length of eighteen miles. Not only were the works of a heavy and costly nature, but the time allowed for the completion was so short as to render the utmost diligence and energy necessary. The operations were carried on night and day, and 1,100 workmen were employed.

There was one cutting of unusual dimensions near Winchester, which, in the deepest part, was from 90 to 100 feet in depth. Here, in spite of severe and unfavourable weather, the works were pushed on with the utmost diligence and determination. This was done even at a considerable pecuniary sacrifice ; because the

contractor was anxious, above all things, to maintain and increase the good reputation he had already begun to establish, and of which he was wisely jealous as the surest guarantee for his future success. At Micheldever there was one immense embankment, about 85 feet in height; and at Popham Beacons there was a short cutting, not more than 10 chains in length, intervening between two tunnels, of such a depth that 100,000 cubic yards were excavated in order to make the cutting.

The whole of these works were executed by sub-contract. The amount of work let to a particular sub-contractor was determined by the appreciation formed by the principal contractor or his agent of the ability of the individual to carry out the work. A man of superior qualifications was allowed to take a sub-contract for an amount of work, increasing in magnitude, in proportion to the confidence entertained in his ability. Some of the sub-contractors would take contracts for work costing in the total 15,000*l.* to 20,000*l.*, and employing from 150 to 200 men.

Frequently the sub-contractor would again let his work to the navvies at so much a yard. They worked in what were called butty gangs, or parties of from six to twelve men. The navvies would take a contract under a sub-contractor for excavating so many yards of earth at so much per yard; and they would divide the earnings equally amongst each other. Disputes would frequently arise between the butty gangs and the sub-contractors upon the question of measurement, and in such cases the resident agent or representative of the principal contractor was required to arbitrate.

When the work was organised in the manner I have described, the function of the principal contractor was rather that of a practical engineer, superintending the execution of the works by a number of smaller contractors. The principal contractor, being responsible to the engineer for the faithful performance of the contract, would watch very closely the work done by the sub-contractors, and see that it was executed in such a manner as to satisfy the requirements of the engineer; but he was not directly the employer of the workmen or the navvies.

The policy was to avoid, as far as possible, engaging a large number of workmen by the day, and to pay every man concerned in proportion to results.

> If little labour, little are our gains:
> Man's fortunes are according to his pains.

The system of sub-contract was carried so far, that I have been informed by Mr. Harrison, the experienced contractor, from whom I have derived the facts already quoted, that the very scaffolding, raised for the purpose of putting together the iron-work of the bridges of the Severn Valley Railway, was mostly erected by sub-contractors. A carpenter would take a sub-contract for the erection of such scaffolding, fixing his price by the cubic foot.

It is always satisfactory to build our general principles, especially those which guide our action in the graver affairs of life, on as broad a foundation as possible. Sub-contracts are much approved in the best shipbuilding yards.

The following observations, coming from one of the

most eminent shipbuilders in the United Kingdom, will be perused with interest by students of the labour problem, whether from a speculative or a practical point of view.

The opinions of the writer, from whom I quote, fully substantiate the conclusions drawn by my father from a large experience in a totally different field of industry :—

'The book and pamphlet on "Work and Wages," you kindly gave me, have interested me very much, and directed my attention *particularly* to the past and present of my trades. I say "particularly," as, although I knew roughly how they stood, your writings set me to make out with considerable, if not perfect, accuracy, some statistics which I felt sure would interest you as much as myself. I have, accordingly, put these into shape, premising you are at liberty to use them in your "work," but without mentioning names or otherwise, further than as illustrating your views. The businesses, in which I am directly or indirectly engaged, are shipbuilding, engineering, forging and founding—in fact, everything to complete steamships from the rough cast of malleable iron. I have seen no reason to regret keeping these several departments under separate heads and management.

'I purpose, however, now taking up iron shipbuilding only, as being much the largest department, and to compare two distinct periods or years—1868 and 1873. In 1868 we had no piecework. Between then and 1873 we introduced it, with some little difficulty, into the iron department and blacksmith

work. We have not yet succeeded in bringing it into play in the ship-carpenter and joiner, and some minor branches, but we bide our time. Fully half our pays go to piecework, leaving the balance for time payment. It is because we only build high-class passenger steamships, that we continue to pay so large a number of men by the day rather than by the piece. I may observe that the wood department runs much higher in proportion to iron than in yards mostly devoted to sailing ships or cargo steamers. The steamships we built in 1868 and 1873 were almost identical in style of finish though differing in tonnage. We had much trouble about 1868 with our iron hands. It was difficult to get men, the demand exceeding the supply. The introduction of the piece system, that is to say, the payment by results, led to hard, or at least fairly hard work, on the part of the skilled men, and to ingenuity on their part and ours to save unskilled labour by the introduction of machinery. The result has been that skilled and unskilled men make 50 per cent. to 75 per cent. more earnings. We get the work per ton of iron in the ships about 20 per cent. cheaper; and, from a much smaller number of men being required, the supply is approximately equal to the demand. Since we introduced piecework we can estimate to within a fraction what the iron and blacksmith work will cost, and we could never do so before. Here I would observe that all this has been accomplished with working time in 1873 reduced to 54 hours per week, whereas in 1868 the men worked 60 hours a week. As to the skilled hands—and they are all highly skilled men—in the

wood departments, we had to pay higher wages in 1873 for 54 hours' work than in 1868 with 60 hours'. We have, however, met this by the introduction of machinery. Our joinery and cabinet department is now like an engineer's shop, with tools for *every description of work.* I may say in every part of our work, during the past three or four years, we have been introducing 'steam' and other appliances where we could; and there has been generally sharper supervision and attention on the part of those in charge, and our manager over them.

'I may now come to results. In 1868 we launched nine steamships, in round numbers aggregating 13,000 tons. I take gross new measurement in each case for the purpose of comparison. The wages bill was 78,963*l.*; average number of men and boys employed, 1,776. In 1873 we launched seven steamships, in round numbers aggregating 18,500 tons; wages bill, 91,838*l.*; average number of men and boys employed, 1,550. In 1868 the average wage earned per week of 60 hours was about 17*s.* 1*d.* In 1873, per week of 54 hours, about 22*s.* 9*d.* In 1873 the cost per ton, gross new measurement, in wages only, was fully 20*s.* cheaper than in 1868, but this reduction is due to the piecework departments. We consider it something to have met the increase in wages and diminution in hours of the 'time-workers' by the means already mentioned.

'I am not clear that these time-workers work harder whilst they are at it than they did before the advance in wages and the decrease in hours, but we

may have gained something from sharper over-looking. As I have said, we have effected considerable economies by the introduction of steam machinery and other labour-saving appliances.

'The piecework system keeps us clearer of disputes and trouble with our men than we were under the old method; and men and employers alike make a better result. I look to "payment by results" as a system calculated to put an end to many trade disturbances, but trades unions are opposed to it. As ours is practically a non-union-yard, we hope in time to overcome the obstacles in our way, and to make the one system universal. Piecework in the iron department of shipbuilding is now general in the Clyde district.

'As this year will complete my thirtieth in the employment of labour, you will see that my experience of it is somewhat large.'

On theoretical grounds I would advocate strongly the adoption of the co-operative principle pure and simple; but I would also commend to those interested in the cordial alliance of labour and capital the methods of payment so successfully applied by Messrs. Briggs, and Fox, Head and Co., as worthy of attentive examination, and as affording, if only a partial, still a much easier, solution of the labour problem than that proposed by the advocates of a purely co-operative system.

The principles of the scheme of Messrs. Fox, Head and Co. have been explained by themselves in a circular, addressed to their workmen, in the following terms:—

'This scheme has been prepared and adopted for the purpose of preventing the occurrence of disputes between employers and employed, which often arise, it is believed, from a mistaken estimate on the part of the employed, of the amount of profit capable of being made. Hence a tendency to dissatisfaction with current rates of wages.

'The principles of the scheme are as follows:

'That every person employed shall have a pecuniary interest in the success of the business, and the profits to be made; that interest being as far as possible in proportion to the services rendered.

'That the labour employed, whether of workmen, clerks, foremen, managers, or partners, shall be remunerated by wages or salaries at the rates customary in the district.

'That the capital employed shall be remunerated by a specified rate of interest.

'That the works and plant upon which the capital has been expended shall be kept up in a perfect state of repair, and that to cover renewals and depreciation a reasonable allowance shall be made out of the profits of manufacture.

'That a fund shall be created and maintained as a provision against loss by bad debts.

'That these provisions being satisfied, any surplus profit shall, at the end of each year, be ascertained and certified, and the amount thereof divided into two equal parts—the one to be paid to the capitalist, and the other to be divided among all those engaged in the

manufacture, in proportion to the amounts earned by them during such year in wages and salaries.'

In the establishments to which I refer, and which are so well known to all who take an interest in co-operative production, the employers have endeavoured to give to the workmen a direct personal advantage from the success of the business, while retaining in their own hands the absolute power of directing the general policy and management. Keenly alive to all the evils arising from divided responsibility, and the admission of workmen inexperienced in commercial affairs to an equal authority with their employers, they have sought to protect themselves from the ill effects of corporate management, and yet to give to the workmen a full share of the profits, in proportion to their skill and diligence.

It is some eight years since Messrs. Fox, Head and Co. brought out their scheme. In that interval, amid the many fluctuations to which their trade is always subjected, they have paid between 6,000*l.* and 7,000*l.* to their workmen by way of bonus; and the result has been eminently satisfactory to the employers. They think they have a superior class of workmen, and that they stay longer at the works. They obtain the best prices for their manufactures. They have no disputes, and pay no contributions to standing committees or courts of conciliation. The employers are well content with the arrangements they have made; and the conduct of the workmen shows that a feeling of mutual satisfaction prevails.

It is not necessary to describe in detail the system

adopted by Messrs. Briggs. In August of last year (1873), they distributed among 1,754 workmen employed by their Company, upwards of 14,250*l.*, as their share of profits for previous year. It is stated by Mr. H. C. Briggs that several miners received 30*l.* each; and that, since the distribution, they have had applications from their workmen for about 700 additional shares in the Company; though they were asking 10*l.* premium on the shares, on which only 12*l.* 10*s.* have been paid. About half the sum paid as bonus has thus been returned to the Company by the workmen in premiums on the shares applied for. For several years a workman director has sat on the board, who is qualified by holding one share in the Company, and by the receipt of weekly wages. This representative of labour is annually elected by the votes of shareholders actually in receipt of weekly wages. Formerly one of their most bitter opponents, the Messrs. Briggs believe that the insight he has lately gained into the difficulties of conducting large industrial undertakings, will effectually deter him from renewing the strife of former days.

Monsieur Godin, of Guise, has adopted the following scheme of paying his workmen, with a view to giving them an interest in the success of the business in which they are employed. Capital, invention, and labour being alike essential to the production of wealth, the problem to be solved is the apportionment of the profits equitably among the several interests concerned. In determining the rate of interest due to capital, the workmen, in the opinion of M. Godin, should be pre-

viously consulted; and the rate should be determined with due regard to the risks of trade and other circumstances. In the scheme, adopted in the establishment of M. Godin, capital receives a clear 15 per cent. interest; the workman is paid his ordinary wages; and provision is made to cover the charges for administration and mechanical inventions. These necessary expenses having been provided for, the balance over, if any, is regarded as the net profit; and it is apportioned, one-third to the reserve fund, and the remaining two-thirds to capital and labour, in proportion to the fixed amounts, payable to each from the earnings, before the net profits were ascertained. The practical operation of the system may be illustrated by an example. Assume that the sums payable had been—

	£
Wages	9,000
Interest on 40,000*l.* at 15 per cent. .	6,000
General charges	1,000
	£16,000

Then if 2,400*l.* be the net profit, one-third, or 800*l.*, equal to 5 per cent. on the fixed expenditure, is set aside to reserve; and the balance of 1,600*l.* is appropriated to capital and labour, in proportion to their respective shares in the fixed earnings. Thus the sum of 900*l.* is added to the earnings of the wage-receivers, the sum of 600*l.* is payable as bonus to the capitalist, and 100*l.* to the management. Under the system usually adopted, capital would have claimed the whole of the 1,600*l.*

The evils of a general pay-day are well understood by persons at the head of great industrial establishments. The drunkenness and disorder, the wasted earnings, the subsequent irregularity of attendance, are the familiar yet regrettable incidents of a general distribution of wages to a numerous body of workmen. M. Godin pays his workmen every fortnight. He has divided them into sections, and each section is paid separately. The pays take place three times a week, and one section only of the workmen is paid on the same pay-day. By this arrangement, the irregularities, inevitable when a general distribution of wages takes place, are avoided. The small proportion of men, receiving their pay on any one pay-day, are kept in order by the example of steadiness afforded by their fellow-workmen, who are not disturbed by a recent payment of money.

With these encouraging examples before them, many employers may be glad to follow the same course. Any plan, by which workmen may be made to realise that they row in the same boat with their employers, should not be lightly set aside. It is good policy to forego a portion of the profits of a prosperous year, in order to avert the calamity of a strike, with all its attendant evils of loss of profit, and bitterness and strife between masters and men.

Capital and labour are essentially necessary and interdependent elements of production; and the man of business, not less than the philanthropist, must desire to see the representatives of the two interests closely allied.

I remind this conference of these and other efforts to combine the principle of co-operation with the undoubted advantages of undivided responsibility in the administration of a large undertaking, because I am satisfied that the corporate system is not always applicable.

Where no special personal influence is needed, for the purpose of securing clients and customers, and where the internal economy of an establishment can be conducted by a regular routine, there will be no practical disadvantage in the management of a board or council. But when no transaction can be completed without long and difficult negotiations; when an undertaking is of a kind that cannot be conducted in accordance with fixed rules, and the emergencies, which must from the nature of the case arise, are always unforeseen, and must be met on the spot by an administrator, upon whose skill and conduct all will depend—in such a case, the co-operative system, pure and simple, becomes impossible; and the ingenuity of masters and workmen, wishing to work together in friendly alliance, should rather be employed to devise schemes, whereby the equitable distribution of profits among the workmen may be combined with the necessary concentration of authority in their employer.

There must always be peculiar advantages in the personal supervision (to borrow a French expression) of an experienced 'chief of industry.' The earlier railways of this country were completed with great expedition. There was an anxious demand for improved arterial communications by the new method,

the superiority of which was universally acknowledged, so soon as it had been proved practicable. In those days the difficulties of the pioneers of the railway system were great. The best methods of surmounting the engineering problems encountered were not yet perfectly ascertained. In driving a tunnel through a quicksand, in forming a high embankment, or excavating a deep cutting in treacherous and yielding soil, in carrying a line of railway over the trembling bog, the contractor sometimes endured the mortification of seeing the labour of weeks destroyed in a moment.

When in trouble and anxiety, when a difficulty in the execution of the works presented itself, his representatives on the spot would seek for the valuable advice of their chief. In such an emergency he assumed the management of the works; and his was in fact the directing mind to which his subordinates referred, and by which they were guided. Nor did they ever recur to him without obtaining valuable counsel, the fruits of a wider and more varied experience than their own. It would, in fact, have been impossible for any individual to accumulate the same knowledge, without having the same exceptional opportunity of keeping a continual watch over a large number of operations simultaneously in progress.

In a time of discouragement the personal visits of the master, the words of kindness to the disheartened workmen, the novel yet practical suggestions evolved from a fresh and vigorous mind, brought to bear upon a problem, which had baffled the men more imme-

diately concerned, would never fail to cheer up the industrial army, and arouse them to new, and in the end, always victorious efforts.

These details will have sufficiently explained the relations in which the railway contractor, or any other large employer, should stand to the members of his numerous staff. To me it seems that no board or council could ever take the place of an individual fitted by character and experience for his work, when such operations as I have described are to be carried out successfully. The inspiration given to subordinates under trying circumstances, the stores of knowledge and experience of the engineering art, the confidence imparted to engineers and directors and shareholders by the personal reputation of their contractor—these were advantages inseparable from purely personal management and responsibility, and they never would have been obtained from the cumbrous machinery of a board.

For complicated undertakings co-operative organisation will rarely prove effectual. A council of war never fights; and no difficult task in the field of peaceful labour can be brought to completion without a trusted leader.

M. Renan, in his interesting essay, *La Réforme intellectuelle et morale*, confirms these observations from the results of French experience.

'Rappelez-vous ce qui a tué toutes les sociétés coopératives d'ouvriers; l'incapacité de constituer dans de telles sociétés une direction sérieuse, la jalousie contre ceux que la société avait revêtus d'un

mandat quelconque, la prétention de les subordonner à leurs mandants, le refus obstiné de leur faire une position digne.'

One more suggestion, and I close my remarks on this aspect of the case. In many descriptions of enterprise the commercial result cannot be ascertained until after an interval of time has elapsed, too long to be tolerable to a body of workmen dependent on their weekly wages. I again choose an illustration from the experiences of the railway contractor. Take the case of a concession for a long line of railway on the Continent. The first conception of the project will probably come from some local engineer. He makes a rude preliminary survey of the country to be traversed. He comes to England with his rough studies to seek the financial aid and larger professional experience of one of our eminent engineers or contractors. The negotiations proceed, and the English promoters make a second and more careful examination of the scheme, involving a repetition of the original survey. Plans and an estimate are prepared at considerable expense, and negotiations are thereupon commenced with the Government, within whose territories the proposed railway will pass. Weary months, and sometimes years, elapse before a decision is obtained. Let us assume the decision to have been favourable, and that a concession has been granted. Then follows the execution of the works, which, if the length of the railway is considerable, may probably occupy a period of three years. While the construction is progressing, financial arrangements must be made in order to form a company,

to take over the concession from the contractors, and to raise the capital for the line by public subscription. The subscription may possibly be only partly successful. In that event, the contractor must meet a large proportion of the expenditure from his private resources. Before he has succeeded in disposing of his proportion of the shares or bonds allotted to him, a European war may have broken out. In that case, an indefinite period must elapse before the securities are realised.

This is no imaginary picture. In the business with which my name is identified, the history of every transaction is a repetition of the story I have narrated. It is not an exaggeration to say that an interval of ten years ordinarily elapsed, between the opening of communications with the original promoters and the final payment for the construction of the works. You may easily imagine the hazards and uncertainties of an enterprise of this nature. No true friend of the working classes would recommend them to risk their hard earnings in such adventures.

The general business of the country, however, is of a more stable and methodical character, and better adapted for the application of the co-operative principle.

And now let us pass on to consider other developments of the co-operative principle, second only in their importance to co-operative production, and perhaps more practicable in execution.

It is impossible to exaggerate the importance of adopting every means of enabling the labourer to lay

out his scanty resources to the best advantage. The co-operative stores furnish him with supplies on the most advantageous terms.

But this is not the only object at which we ought to aim. Economy in consumption is scarcely less desirable. Take, for example, the consumption of fuel. Captain Galton has expressed an opinion, based on much investigation, that five-sixths of the coal consumed in our houses is absolutely wasted. If we had a more effective description of grate than that in ordinary use, instead of consuming 32,000,000 tons per annum for domestic purposes, our consumption would be reduced to 5,000,000 tons. Captain Galton says that with only moderate economy not more than from 12,000,000 to 16,000,000 tons need be used. This economy in the household consumption of coal would enrich the nation to the extent of from 20,000,000*l.* to 30,000,000*l.* annually.

The co-operative societies should exert themselves to bring into use among the working classes the very best grate and cooking range that can be contrived. The merits of that invented by Captain Galton are well worthy of their attention.

As in the use of fuel, so in the art of cooking, there might be effected an almost incalculable economy of food, if our English housewives were as skilled in cookery as the peasantry of France. The co-operative associations should organise the means of imparting a complete knowledge of culinary matters to the mass of the population. In all great towns workmen's restaurants might be established on a large scale. The more

extensive the arrangements, the more easy it would be to introduce the utmost possible economy. The mid-day meal might be eaten by many artisans and factory operatives at the restaurant itself; and for others who wished to enjoy the comforts of their own firesides, dinners and suppers might be cooked at the restaurant, and taken home to be eaten. Abroad, arrangements of the kind indicated have been long established in every large town, and especially in France and Italy, and they have been found to work most conveniently and economically.

As an example of the great results which can be accomplished in a well-managed restaurant for working men, the following details are given relating to the establishment created by Mr. Colman, M.P., for the benefit of those employed in his extensive manufactory of starch and mustard.

'When first started,' to quote from a letter recently received from Mr. Colman, 'the aim was rather to meet a want felt by the workmen. It was not calculated that the Carron Works Kitchen would pay its way. The firm, therefore, still bears the cost of rent, coals, and gas, as well as the general charges of wear and tear on utensils, but not the wages of the attendant.

'Yet, while it cannot be said that the kitchen is entirely self-supporting, it may with equal truth be said that, by making the tea and coffee rather weaker, or with a reduced price of meat and sugar, neither of which seems altogether an improbable event, all expenses would be paid.

'The Carron Works Kitchen was commenced in

March, 1868, and is for the use of the Carron work-people exclusively. The bill of fare consists of coffee served at 5.45 A.M., when the workmen are assembling for work, and a second supply at 8.30 (the breakfast time). On *two* mornings in the week we provide *tea* instead of coffee at 8.30.

'For the early breakfast at 5.45 we find the men prefer *coffee* to tea, as more nourishing. Some of them said they should take beer in preference to tea before coming to work, but they should like coffee better than either. Our object in providing this early coffee, is to check the habit of drinking beer in the morning. We only commenced the early breakfast six months ago, but it seems likely to be very popular. The price for tea or coffee is 1*d.* a pint, with milk and sugar.

'The dinners consist of four different kinds, but only one kind is prepared on the same day:—

'I. A ¼-*lb.* of roast meat with gravy and vegetables and a 'Norfolk dumpling' (*i.e.* a halfpenny-worth of boiled bread) is served for 4*d.*

'II. A stew of English meat and vegetables, with dumpling, 3*d.*

'III. A stew of Australian meat and vegetables, with dumpling, 2*d.*

'IV. A pint of soup, 1*d.*

'We use the Australian *cooked* meat, which is imported in tins, and only requires to be warmed up. We have used about 60*l.* worth, during the last year, of the Australian meat.

'As to the increase in the consumption, it is, in round numbers, as follows:—

	Tea and Coffee, Pints	Dinners
April 1, 1868, to March 31, 1869 .	9,677	13,990
1869–70	20,645	11,107
1870–71	27,017	13,977
1871–72	30,313	13,473
1872–73	55,210	20,957
1873–74	76,117	25,776

'The kitchen is nearly self-supporting.

'The following is a list of the *principal* items of expenditure for the year 1872–3. The accounts for 1873–4 are not yet made out.

Paid.	£	s.	d.
English meat	86	7	11
Australian meat	53	2	6
Dumplings	24	12	9
Coffee	42	19	3
Tea	41	12	0
Sugar	80	0	4½
Wages	35	19	0
Sundries	15	11	5
Flour	3	4	10
	£383	10	0½

Milk . . . . . .
Vegetables . . . . . .
Rent . . . . . .
Coals and Gas . . . . . .

1872–73.—*Received:*—

Tea, Pints	Coffee, Pints	Dinners	£	s.	d.
24,805	30,405	2,852 at 4*d.* 1,717 „ 3*d.* 7,255 „ 2*d.* 9,133 „ 1*d.* 20,957 Dinners.	397	11	0

CASH ACCOUNTS.

Dr.	£	*s.*	*d.*
To cash received	397	11	0
	£397	11	0

Cr.	£	*s.*	*d.*
By payments	383	10	0½
Balance in hand	14	0	11½
	£397	11	0

Dr.	£	*s.*	*d.*
Stock in hand	11	11	9½
Cash in hand	14	0	11½
	£25	12	9

Balance in favour of kitchen towards paying for milk, vegetables, rent, coals, and gas.'

The results attained at the Carron Works must be admitted to be eminently satisfactory. By an excellent organisation, mainly due to the kind-hearted and intelligent exertions of Mrs. Colman, a great boon has been conferred on a multitude of workmen; and the only contribution required from the employer has been the personal attention devoted to the initiation of the system.

Among many recent efforts to ameliorate the condition of the working class, one of the most original and spirited has been made by Monsieur Godin, the founder of the familistère, or general dwelling-house, for his operatives and their families at Guise. The principles of the scheme, and the mode in which the attempt to develop these principles has been conducted, are set forth by M. Godin in his interesting volume, entitled, 'Solutions Sociales,' from which the following

details are extracted. The originality of the plan and the general idea, underlying the whole conception of the founder of the institution, that the condition of the masses can be elevated only by their mutual action for the common good, will be essentially acceptable to the friends of the co-operative movement. Whether the familistère is a judicious application of the principle is another question.

There have been many isolated efforts in France and Belgium to improve the habitations of the working class. At Mulhausen especially a large number of houses for workmen have been erected, constituting what has been called a Cité Ouvrière. M. Godin objects that the dwellings, erected at Mulhausen, are too cramped in dimensions; that the workmen having been encouraged to purchase their cottages, the founder of the Cité Ouvrière has lost all power of direction and control; that the rooms originally barely sufficient for the wants of a family, are sublet as lodgings; that pig-sties are constructed in the tiny garden attached to each cottage; and that, thus dirt and noxious odours are allowed to pervade the suburb. M. Godin, not without some justification, finds fault with the term Cité Ouvrière; and he, perhaps justly, says that the name implies the separation of those, who, by their labours, are the creators of wealth, from those who enjoy the use of that wealth by inheritance or by successful speculation.

A more favourable opinion of the Cité Ouvrière of Mulhausen has been formed by Lord Brabazon, who says, in his able paper on the industrial classes in

France that, 'the condition of the lease granted to the workman, allowing him, after a certain number of years to obtain the freehold of his house, has an immense moral influence. His self-respect increases, and he is enlisted on the side of order. The absence of supervision removes a fruitful source of irritation. The cités ouvrières erected for the workmen of Paris, though possessing every advantage of space, air and light, have never been popular, because the strict discipline maintained,—as, for example, the closing of the gates at ten o'clock at night,—is an irksome restriction to the excitable and pleasure-seeking population of the French capital.

The criticisms applied to the Cité Ouvrière at Mulhausen may be applied with greater reason to London and the great towns of our own country. The rich gather together in the most eligible situations. The price of land in certain positions becomes so enormous, that it is impossible to erect houses at rates which, while not exceeding what workmen can afford to pay, will be remunerative to the owners and builders. Hence the working class are compelled to occupy more remote suburbs. They live in daily contact with no other class but their own, and a consequent danger is incurred of social disunion. This state of things is practically inevitable under our existing system; but it is not the less a regrettable incident of the great increase in our population.

M. Godin suggests that it is a paramount obligation of the wealthy to organise means for securing to the

masses a larger measure of the luxury and comfort created by their toil and labour.

The tendency of modern industry has been, and will continue to be, towards the concentration of capital in large private or corporate establishments, and to production by machinery, in substitution for manual labour. The use of machinery, necessarily operates unfavourably to the interests of small manufacturers without the resources of capital. This general tendency of our industrial organization has been promoted by the railway system. Consumers have been enabled to obtain their supplies from the cheapest markets, irrespective of those considerations of transport, which in former times more than neutralised the advantages of different localities for special branches of trade. Before the introduction of railways, it was essential to obtain the more bulky articles from the local producer. Now, the consumers are enabled to go to the localities where the articles required can be produced of the best quality, and at the cheapest rate.

The attention of the employers has hitherto been concentrated on the organization of the factory and the workshop, on the great scale required in the present day, in order to carry on competition in manufactures with success. But, though much has been done to organise the production, nothing has been done to organise the consumption and the use of products.

The problem of domestic consumption has been solved in the opinion of M. Godin, by the erection, close to his workshops at Guise, of an edifice which he

calls a social palace. It is a vast barrack, capable of containing 900 inhabitants. The building is several storeys in height, and consists of three large courts, surrounded by galleries communicating with the rooms. Each room is let separately, so that the lodgers can regulate the rents in exact and constant proportion to their requirements. The unmarried and the married, according to the number of their family, can occupy a greater or lesser number of rooms. The building cost 40,000*l.* and the capital expended has been divided into shares of small amount, with the view of inducing the workmen to purchase them, and thus to become their own landlords. The rents of the rooms give a return of 3 per cent. upon the capital, and the profit upon the sale of provisions gives an additional percentage of the like amount.

M. Godin quotes the principles advocated by Fourier as the foundation of his system. Fourier thought, that by grouping many families together, each individual might undertake, for the general service of the community, that special function in which he excelled. Cooking, and all the domestic duties would thus be performed by persons specially selected. At the familistère there are general kitchens for the whole establishment, from which the meals ordered by lodgers are supplied. The children, as soon as they can leave their mothers, are brought up first of all in infant schools, and then in more advanced schools, where they receive an excellent education.

It is contended that under this system the working men enjoy by combination, to a great extent, those

advantages which must otherwise be the exclusive privilege of wealth. Cooking is often badly done for the rich, *à fortiori*, it is to be expected that it will be unskilful in the homes of the poor. To command the services of efficient persons, whether in the capacity of nurses or cooks, is regarded by M. Godin as among the greatest advantages of ample resources. By combination the occupants of the social palace at Guise are enabled to place their children, even at a tender age, under the care of well-trained nurses, and to obtain their own food properly cooked.

Where the working men live apart from each other in small houses they are necessarily widely scattered. They are at a distance from their work, and their children are so far from school that their attendance is always difficult, and often most irregular.

In case of illness the services of a medical man may not be easily obtained, and medical comforts cannot be provided, as they can be in an establishment having a well-equipped dispensary for the general use of the inmates.

The social palace at Guise stands in the midst of extensive and well-kept pleasure grounds on the banks of the Oise. It has an excellent theatre, where dramatic representations and concerts are frequently given by associations, formed for the purpose by the operatives.

The internal management is carried on by committees, composed of twelve men and twelve women. The men devote themselves specially to questions relating to the amelioration of the condition of the

workmen, the rates of wages, and the formation of provident societies. The women supervise the quality of the provisions supplied from the co-operative stores and butchers' shops connected with the social palace. They also superintend the management of the children and the arrangements for preserving order and cleanliness.

It is alleged that there is an entire absence of crime in this singular community, and that public opinion, the more sensibly felt when all dwell together under the same roof, has raised the tone of conduct and morals above the standard generally maintained among persons of the same class, living in private dwellings.

A system of domestic economy, not widely dissimilar from that adopted at the familistère, has been extensively followed in the United States by the well-to-do classes. To avoid the difficulties and extra expenditure of a separate household, many married couples permanently reside at the large hotels. They secure similar advantages, and suffer similar inconveniences, to those experienced by the inhabitants of the social palace at Guise. The want of privacy and retirement, the loss of much that we should value and cherish in family life, are grave disadvantages, inseparable from the *quasi* collegiate system of which the operatives of M. Godin have been induced to make a trial.

Life in common is more congenial to some dispositions than to others. It would probably succeed better in France than in England. On the other hand,

there are many serious drawbacks in a too great isolation. On the whole, I venture to give an opinion that, as a marked success would seem to have attended the experiment at Guise, it deserves the most attentive consideration on the part of our working people in this country. They have already proved the value of the co-operative system for obtaining their supplies. The so-called social palace is a further development of the same principle. In numerous cases it might be found to offer most important advantages of comfort and economy.

The co-operative principle may be beneficially applied not merely to productive industry or economy in consumption, but to the scarcely less difficult and important work of providing higher amusements for the people. In Vienna the dramatic art is still maintained at a high standard. The theatres are a favourite resort of the people, and the representations include pieces calculated to raise the moral tone and improve the taste of an audience. The novelties latterly introduced into the English theatre tend to degrade the stage. With many illustrious exceptions, it may be said that inferior plays and players have been too easily accepted; and that some stage managers have sought to make money by appealing to those lower tastes, which cannot be indulged without injury to the national character. I should be glad to see an effort made by those, who have led the way in other co-operative undertakings, to apply themselves to the cultivation of the musical and the dramatic arts.

The choral associations are a delightful and most elevating source of amusement in every town in

Germany. Already, in many of our manufacturing towns, music is being widely and highly cultivated. The drama may offer greater difficulties, chiefly on the score of expense; but the means at the disposal of many co-operative associations might be applied to a limited extent, yet with great advantage, to promote a taste for dramatic representations of the better sort among the people.

The English have been reproached, perhaps not unjustly, as a nation destitute of resources for amusement. Indulgence in eating and drinking has been the only recreation the uninstructed labourer has been capable of appreciating. It is a lesson many of us have yet to learn, that time given to innocent pleasure is not wasted; and that there are other things besides fame and money, for which it is worth our while to live. To use the happy phrase of Mr. Goschen, 'a livelihood is not a life.' It is not well to concentrate all the thoughts on work, and take no pains to provide pure and elevating enjoyment.

I am not here to speak of politics. But Mr. Gladstone and Mr. Forster, and their supporters in the last Parliament, are entitled to gratitude for a measure of infinite value to co-operation in the passing of the Education Act. Whether this or that provision be approved or disapproved, the substantial result must be to qualify all the working men of the rising generation to embark their savings, with more confidence than before, in a society for co-operative production. Until they have mastered the art of book-keeping, and have acquired the habit of reading those trade reports afford-

ing the only clue to their true position, the co-operative workmen are too dependent on the opinions of others. Being ignorant, they are inclined to be suspicious; and they are reluctant to reward generously services they are unable to appreciate.

At the same time, I sincerely hope that the progress of education in England may not be attended with the regrettable consequences, that have followed from a wide diffusion of knowledge in other countries.

In the United States, the result of universal education has been to make the native-born Americans averse to manual labour. The dignity of the pen is so much more highly regarded than that of the hatchet or the hammer, that the youths of America universally prefer to take very moderate pay as clerks, rather than earn the wages, double their own in amount, which are given to skilled artisans. The false estimate they have formed of the prestige of a sedentary occupation is due to their education. Even in Germany it has been found that foremen in workshops, notwithstanding their higher responsibilities, do not receive proportionate wages; because the general diffusion of education has made most artisans competent, and has made all desire, to undertake duties of supervision, and thus escape the indignity of manual labour.

Education in Greece being practically gratuitous, thousands of men think themselves fitted for some calling more intellectual than that of the manual labourer. Hence it is, that while every deputy in the Representative Chambers, and every member of the Government is besieged with applications for the smallest posts in

the public service, the labour market is largely supplied from Crete and Turkey.

The remedy must be to withdraw a part of the subsidy now given to the University, and to apply the funds to instruction in the practical arts. The mental energies of Greece should no longer be devoted to purely intellectual, to the exclusion of practical work.

Arguing from these examples, it may be apprehended that the advances of national education may not be an unmixed benefit to a people hitherto pre-eminent in the practical arts; unless public opinion be firmly set against the tendency to regard the labour of the hands as derogatory.

An infinite number of plans might be proposed to ameliorate the condition of the people. The Government may, without weakening the spirit of independence, introduce the system described by Mr. Gould, and adopted with so much advantage in Switzerland, of establishing a people's bank, under the guarantee of the State, in every village. In the Swiss banks deposits of the smallest amount, even of a few pence, are received. Intending depositors bind themselves to pay into the bank a weekly sum. The minimum is fixed at $9\frac{1}{2}d.$, and the maximum at $2l.$ The payment is to be continued during three consecutive years. Interest is allowed at $4\frac{1}{2}$ per cent. on all sums above $4s.$ The rate allowed in our own savings banks is too low. It might be raised without loss to the Government, and a higher rate would materially increase the inducements to save.

Every description of banking business is transacted by the Swiss banks; but the special feature is that loans

are made to depositors on the security of their deposits, provided the loan does not exceed 75 per cent. of the amount at credit. Interest is charged at 6 per cent. At the end of three years the deposits are returned with the accrued interest, and a proportionate share of the profits of the bank. The amounts so returned may be re-invested in the bank in 4*l.* shares, bearing 4½ per cent. interest, and entitling the holder to a participation in the profits. The first of these banks was founded so recently as 1865, and they have been most successful.

A mode of perfecting another great social reform has been put forward by the Committee of the Charity Organization Society on Dwellings for the Labouring Classes. They have recommended that the Government should endeavour to afford facilities for providing better habitations for labourers. Many private agencies exist for this purpose. The Peabody donations, which now amount to 600,000*l.*, may be quoted as a crowning instance of individual munificence; while the Metropolitan Association, the Industrial Dwellings Company established by Sir Sydney Waterlow, which has invested nearly 250,000*l.* in the erection of workmen's habitations, and the London Workman's Dwellings Company, founded in 1862, may be selected as examples of extremely beneficial, and, at the same time, fairly remunerative organisations. The societies here mentioned have paid steady dividends of 5 per cent. By wise arrangements it is asserted that the work of re-construction need not be unprofitable. The valuable sites in the centre of large towns are not economised as they ought to be. It is stated by the Metropolitan

Association that, whilst the population of Westminster is only 235 persons to the acre, in the dwellings they provide, including in the area large court-yards and gardens attached, the population is upwards of 1,000 to the acre; and that the rate of mortality is, nevertheless, only two-thirds of the average of the whole of London.

The Committee of the Charity Organization Society are of opinion that large powers for the compulsory purchase of condemned property should be conferred on some suitable authority,—in the metropolis, a central municipal authority—and that the land purchased should be offered for sale or lease to private or associated building agencies. They quote, as an instance of the conspicuous success of such a policy, the action taken by the municipality of Glasgow, under a Local Improvement Act passed in 1866. Availing themselves of their powers, the civic authorities have borrowed and expended upwards of 1,000,000*l.* in the purchase of property, a portion of which had been resold, while the greater part was let, and yielding 24,000*l.* a year. The building had been conducted throughout by private agencies. At the outset a rate of sixpence in the pound had been anticipated, and a loss of capital of 200,000*l.* The rate had actually been kept at sixpence only for one year. It remained at fourpence for two years; and had since been reduced to threepence, with the prospect of an early reduction to twopence; while the capital loss was not now expected to exceed 50,000*l.* at most.

Equal success has marked similar efforts in Edinburgh and Liverpool. The Artizans and Labourers'

Dwellings Act of 1868, which the country owes to Mr. M'Cullagh Torrens, has already produced excellent results, and under its provisions improvements in Liverpool have been carried out. The Act originally contemplated four purposes,—compulsory repair, removal, compensation, and building. The powers of compensation and reconstruction were removed by the House of Lords. The committee of the Charity Organization Society recommend that those powers should be restored.. Their recommendations have been adopted in the recent Act brought in by Mr. Cross at the instance of Sir Ughtred J. Kay-Shuttleworth.

The recent rise in wages and prices presses with a heavy burden on every individual; and unless there were a concurrent rise of prices abroad, we should have a gloomy prospect in view for the future of England. No other country is so dependent on the superiority of its workmen, both for excellence and economy of production. In no other population is the proportion of those who live by the fertility of the soil so small, by comparison with the classes who live by the application of skilled labour to the manufacture of goods for foreign markets. In the anxiety and the inconvenience experienced from the advance in wages, people are disposed to attribute the concessions, made most reluctantly to the demands of workmen, to some arbitrary cause, such as the superior organisation of trades-unionism. They mistake a manifestation of power for the actual sources of power and strength.

There has been much outcry at the recent increase in prices and in wages. There is nothing new to economic science in our recent experience. All the

oscillations in the labour market can be fully explained by the long-recognised law of political economy—that the rates of wages, like the price of commodities, are regulated by demand and supply. I will illustrate the operation of this rule in one department of trade, that of shipbuilding. The tonnage of the new vessels built in the United Kingdom in 1862 was 310,900 tons; in 1865, 607,000 tons; in 1871, 391,000, and in 1872, 475,000 tons. In the latter year, therefore, there was a great increase upon the tonnage of the first year included in the period under review; while in the inflation of the shipbuilding trade, which reached its climax in 1865, the amount of tonnage built was doubled in three years.

It is clear from these considerations that there has been a permanent increase, and occasionally an enormous increase, in the demand by shipbuilders for the supply of the highly-skilled labour required for their trade. In the meanwhile the total number of artificers employed exhibits no corresponding augmentation. In the period embraced in the recent census, 1861-71, the number of shipwrights and shipbuilders has been slowly increased from 39,053 to 40,605 men.

Arguing from the reports published by the *Economist* of the state of the shipbuilding trade on the Clyde and the Mersey, we may reasonably assume that in 1873 there was no diminution of activity. The aggregate tonnage of ships built on the Clyde was in 1870 189,800 tons; in 1871, 196,200 tons; in 1872, 224,000 tons; in 1873, 261,500 tons. Of this tonnage, six steamers, of 18,200 tons and 3,300 horse-power, were built for the North German Lloyd's; five steamers,

of 13,325 tons and 2,100 horse-power, for the Peninsular and Oriental Company; three steamers, of 11,250 tons and 1,500 horse-power, for the Anchor line; three steamers, of 10,500 tons and 1,800 horse-power, for the German Transatlantic Company of Hamburg.

The demand for the supply of labour has been more urgent, not only through the activity in building new ships, but also through the numerous alterations of old vessels. It has been ascertained that there is much economy in point of horse-power and fuel from an increase in the length of the ships and the adoption of compound engines. It should be observed, further, that the repairs constantly required for our vast fleet of merchant ships must necessarily be very extensive; and in many ports more workmen by far are employed in repairs than in building additional tonnage.

In this marvellous activity ample explanation is given for the rates of wages prevailing in Liverpool, in London, and the Clyde, where ship-carpenters are sometimes earning eight shillings a day, and other trades in proportion. Many masters are competing against each other for the services of but few men. The case would be rapidly changed, if there were more men and less employment. Capitalists should consider whether they themselves are not to blame, ere they impute to the labourers the responsibility for an augmentation in the cost of production. Our workmen, too, should pause, before they proceed to make further demands. It is a question for them to consider how far the advance of prices has neutralised the benefits they derive from higher wages.

I have the misfortune to be the holder of shares in one of our largest lines of steamships; and the recent history of the company affords a striking instance of the need for the admonition I have ventured to address to incautious capitalists.

Within a short space of time the company in question has doubled the tonnage of its vessels, which are all powerful ocean-going steamers of the first class, in dimensions, speed, equipment, and as a necessary consequence, in price. In 1873 the company were supplied with nine steamers from the Clyde alone, one being a vessel of 4,820 tons and 650 horse-power—and the total tonnage and horse-power constructed for them amounted to 28,895 tons and 4,500 horse-power. This was the largest amount ever supplied to a single company in one year. For the same company three steamers of the largest class were built last year by Messrs. Laird Brothers, at Birkenhead.

The construction of this great fleet for one concern alone must have exercised a most appreciable influence on the rates of wages in the shipbuilding yards on the Clyde, and made it sometimes difficult to obtain the labour required for other similar contracts. But the shareholders of this company now learn that the policy of increasing their fleet has been, in a commercial point of view, injudicious. Their trade has not increased with the increase of their fleet, and they would have fared better, had they been content to keep their undertaking within its former limit and scope. Here, therefore, two consequences have followed from the errors of certain capitalists. The course they have pursued

has tended to keep up, if not actually to raise, the price of labour; while they have also sustained a considerable loss from the depreciation in the value of their shares. In the case I have quoted as a warning and illustration of the consequences to be apprehended from errors of commercial judgment, the price of labour cannot be assigned as the direct or indirect cause of misfortune; and similar instances might be indefinitely multiplied to prove that the many great reverses, which chequer the history of our commerce, must be traced, not to the rapacity of the workmen, but to rash speculations.

While I am anxious to do equal justice between labour and capital, and to vindicate the conduct of workmen when unfairly accused, it is my duty to remind the working classes in England that their employers are engaged in the closest competition with all the manufacturing countries of the world. The markets of the United States, almost monopolised in former times by British productions, are now principally supplied with American goods. The tariff, established since the war, presents a formidable barrier to importations from England. If those duties were removed, the difference in the cost of labour would, doubtless, at the present time, secure for England her former position. But it must also be remembered that, assuming the cost of labour in the United States to be 25 per cent. in excess of the cost in this country, the addition to the value of the product does not exceed 5 or 6 per cent.; and, if the duties imposed in the United States on all raw materials should be repealed,

and if, as we may reasonably anticipate, the cost of living should be materially lessened, the cost of production under those more favourable circumstances would be so much reduced, that the present advantages of the British manufacturer would cease, and there would no longer be a sufficient margin to cover the cost of exportation from this country to America.

I cannot conclude these observations on the condition of the labouring classes, without reference to the important influence which must eventually, and it may be very rapidly, follow from the increasing facilities of communication between distant centres of industry. Foreign travel, in former times, was the exclusive privilege of the wealthy; but when the working men begin to circulate more freely from country to country, the class interests which they have in common, will inevitably tend to bring them together, and make them regard with stronger aversion those national struggles in which, from motives of personal ambition, their rulers in past ages have been too ready to engage. Already we see in Germany a party being formed whose sympathies are for France. The originators of the movement are the artisans in the two countries; and, as their numbers will probably increase, they may exercise a valuable influence in promoting the blessed work of reconciliation.

So, too, between England and the United States, the solidarity of the two peoples is a surer guarantee for a close and permanent alliance, than the most elaborate contrivances of diplomacy.

Our eminent writers appeal with equal success to

Anglo-Saxon readers in both hemispheres; and when they visit the United States they are welcomed as men, of whom the American people are proud, because they have conferred distinction on the whole English-speaking race. Our early history, our language, our literature, are common to both nations. They are links which should unite us together as no other peoples can be united. I have elsewhere spoken of the workmen of the United States as the competitors of the English. I trust that their rivalry may be always generous.

As union is most earnestly to be desired between the same classes in different countries, so it is not less desirable between different classes in the same country. If it is hard for the privileged few to appreciate the difficulties of the masses around them who are struggling forward in the battle of life; it is still harder, we may rest assured, for the poor to appreciate the peculiar trials of the rich. We may plead for princes their isolation, and for the nobly-born the absence of many powerful motives which fire the ambition of men of modest station, and lead them forward to a career of usefulness and distinction. We may urge on behalf of the rich that they are a tempting prey to designing men, and can seldom earn the gratitude reserved for those who are believed to practise the virtue of self-denial; but we may rest assured that the mass below them, contending for bare existence, have little sympathy for trials that to them must appear artificial and self-imposed.

Whatever the poor may feel towards the rich, the

duty of the rich towards the poor is too plain to admit of misconception. Whether moved by considerations of policy, or by the nobler impulses of humanity, it must be the object of our universal solicitude that no class in society should be exposed to the fatal influences of despair.

> Full many a green isle needs must be
> In the deep wide sea of misery,
> Or the mariner worn and wan
> Never thus could voyage on,
> Day and night, and night and day,
> Drifting on his weary way,
> With the solid darkness black
> Closing round his vessel's track.

Multitudes there must be in every city contending amid waves that threaten destruction; and when, with anxious glances they seek a refuge from the storm, can they descry the happy isles in which they may repose? The land, if seen, is far away, their bark is sinking, and their only hope the aid of those who have already gained the shore.

An idea prevails in certain quarters abroad that there is no sympathy between the affluent classes in England and the masses of their less fortunate fellow-countrymen. Much more truly may it be affirmed that in no other country is the same deep interest felt in the welfare of the poor. There are philanthropic organisations innumerable for giving aid to all who are in sorrow. The ill-paid clergy, the decayed gentlewoman, the widow, the orphan, the sick, the destitute, whether in mind, body or estate, are all cared for, and in most cases partially, in some effectually re-

lieved. The almoners of this generous bounty are among the best and noblest in the land. Many of their names are familiarly known. There are a still greater number engaged in the same good work, of whom the world never hears. The purest charity will often be found among those who are most exposed to the temptations of ease and pleasure. It is because this sympathy exists, that in England we have as yet been spared the miseries of social disunion; and from this, the most dire calamity which can befall a nation, Heaven grant we may remain for ever free!

VII.

LETTER ADDRESSED TO MR. SHIPTON ON THE SOUTH WALES COLLIERY STRIKE.

HAVING been consulted, in April, 1873, by certain leading men, connected with the trades societies in London, as to the probable issue of the pending struggle in South Wales, I made inquiry on their behalf, and embodied the results in the following letter, which, it is believed, was not without effect in reconciling the colliers to the terms insisted upon by the coal-owners:—

'24 Park Lane, W., April 30.

'DEAR SIR,—In fulfilment of my promise to you, I have had interviews this morning with two gentlemen largely interested in the coalfields in South Wales. While differing as to the expediency and practicability of arbitration, they share the same opinions as to the necessity for a reduction of wages to the extent of 15 per cent., as stated in the last offer of the masters.

'I am convinced that the masters will adhere to their present terms, and that they could not make a more favourable proposal without serious loss to themselves.

'I have reason to believe that the coal-owners in South Wales feel deeply the interruption to their former

cordial relations with their workmen; and that they are prepared, as soon as the men have returned to work, to make a proposition for a sliding scale of wages, varying with the fluctuations in the price of coal, and other circumstances. The adoption of a well-considered scale of wages, based on the selling price of coals, will obviate the risk of the recurrence of the present deplorable struggle.

'I endeavoured to state in my conference with you yesterday the recent history of the fluctuations of wages and profits in collieries. For a long period anterior to the year 1870 the ownership of coal was an unsatisfactory investment. It is equally certain that large profits were made in 1871 and the two succeeding years. The unusual profits attracted a large amount of new capital to our coalfields, and the high prices led to diminished consumption. The supply of coal has now overtaken the demand. Prices have fallen in consequence to such a point that the reduction of wages, now demanded by the masters, must be accepted by the workmen as a dire necessity of the situation. Better times are doubtless before us, and the adoption of a sliding scale will secure to the workmen their fair share in the increasing profits of the business.

'The figures, which were given by Mr. Hussey Vivian in his speech at Bridgend in February, clearly show that the men have participated fully in the advantages derived by their employers from the improved position of the coal trade. The advance in wages between June, 1871, and August, 1873, amounted to 117 per cent. The advance in the price of coal

during the corresponding period was about 100 per cent. The culminating point in the price of coal was reached in 1873. Happily for the public, the exceptional prices were not long maintained. The subsequent fall in the value has been extraordinarily rapid. Steam coal fell from 22*s.* a ton in October, 1872, to 12*s.* 6*d.* a ton in December last. At the present time the price of coal is only 31½ per cent. higher, while the wages of the men, after the reduction now proposed, will be 50 per cent. higher than in 1870. In a tabular statement published in the *Western Mail* in February last it was shown that, whereas, in 1870, the average wages in the collieries enumerated amounted to 4*s.* 2*d.* a day, the earnings would now be 6*s.* 8½*d.* a day, assuming the reduction of 10 per cent. then proposed to have been accepted and that an equal quantity of coal was cut.

'It cannot, therefore, be said that the men have derived no substantial and enduring advantages from the high prices and large profits of the years of inflation, through which we have lately passed.

'I most earnestly advise the colliers of South Wales to return peaceably to their work. The course of events in the sphere of industry and commerce is governed by irresistible laws. You cannot have excessively high prices without unduly stimulating production. When the supply of an article exceeds the demand for it, the price must fall, and with the fall there must be a diminished profit, or, it may be, a most serious loss to the employer, and a reduction in the wages of the workman.

'It is an invariable rule that, in a falling market, the fall in the price precedes the reduction in the wages —always a disagreeable necessity to the employer no less than to the workman—and that the diminution in the wages is not proportionate to the fall in price. In a rising market, the increase in the price precedes, as a general rule, the advance of wages, and the workmen, always contented when wages are rising, not unfrequently acquiesce for a certain time in an advance which may not be fully proportionate to the rise in prices. There is, however, in prosperous times, great competition for labour on the part of the employers; and hence it is certain that in the long run the workman will secure his full participation in the prosperity of his employer.

'For the reasons I have stated, strikes can seldom, if ever, produce an amount of good sufficient to compensate for the evils they entail. But if at any time the workmen in South Wales can derive benefit from an organised conflict with their employers, it certainly is not now, when the depression of trade is such that no advantage can be gained by the prosecution of manufacturing operations in iron. The firm determination of the employers to keep their works closed affords most conclusive evidence that no loss is suffered by the adoption of such a course. In a time of prosperity a general lock-out is impossible. Employers would never be found united in their determination to deprive themselves of the opportunity of making a profit.

'I owe much to the working class. I am grateful

to them, and I heartily sympathise with them in their many difficulties and trials. But I should not show myself their true friend in the present instance if, in answer to the inquiries you have addressed to me, I were to advise any further prolongation of a hopeless struggle.

'Always faithfully yours,

'THOMAS BRASSEY.'

VIII.

ON THE INFLUENCES AFFECTING THE PRICE OF LABOUR IN ENGLAND AT THE PRESENT TIME.

PUBLISHED IN THE *INTERNATIONAL REVIEW*, NEW YORK, 1876.

AT the present time, trade in England is depressed to a degree almost unexampled in the history of British commerce. As a necessary consequence, the tendency of the rate of wages in the principal manufacturing industries is in a downward direction. All our accumulated experience in the development of productive industry, in the age in which we live, does but confirm the principle laid down by Adam Smith and the early masters of the science of political economy. 'When,' as Adam Smith has truly said, 'in any country, the demand for those who live by wages—labourers, journeymen, servants of every kind—is continually increasing, when every year furnishes employment for a greater number than had been employed the year before, the workmen have no need to combine to raise their wages. The scarcity of hands leads to a competitive demand for labour. In bidding against each other in order to get workmen, the employers take the initiative in raising wages.' The course of events in the

British labour market in 1876 is a striking confirmation of the principles laid down in 1776 by the author of 'The Wealth of Nations.'

The same axiomatic principles were set forth in the clearest and most concise form by Mr. Ricardo in 1817. 'Labour,' he wrote, 'is dear when it is scarce, and cheap when it is plentiful.' To these expositions of the law of supply and demand in its application to the rate of wages, I can only add the lesson, derived by my father from his great experience as an employer, that the best paid workmen are generally the best, and the worst paid the worst.

It might have been expected that these principles would have been accepted universally; and yet how few employers of labour act as if they had any faith in the accuracy of deductions drawn from the universal experience of mankind! It was my father's fortunate lot to be among the first who directed their attention to the construction of railways. As the pioneer of the present generation of railway contractors, he undertook large works in every country of Europe, and, Africa excepted, in every quarter of the globe. With such rare opportunities of estimating the relative efficiency of the labourers of many races, and of every clime, his experience taught him that the cost of labour was practically the same in all countries. The proportionate cost of skilled and unskilled labour may vary; and there may be disturbing causes, from the sparseness of population in a sterile or an unoccupied region. I must not, however, occupy your readers further with the elementary principles already stated.

In the relations between labour and capital in England, it is satisfactory to observe the gradual abatement of hostile feelings. The solicitude of the employers for the welfare of the working class has been exhibited in a most practical form in the recent amendments of the laws relating to trade combinations. The improvements effected are summarised in the following passage from an article in the *Times* newspaper, quoted in the *Annual Register*:—'By an Act passed in the session of 1875, all breaches of contract between masters and workmen cease to be, in the eye of the law, criminal offences. Damages may be recovered from workmen for breach of contract of service, and the Courts may, at the request of a defendant, order specific performance of his contract in place of damages, with the alternative of a short term of imprisonment, in default of his new undertaking. But criminal and penal proceedings can no longer be taken.'

By another Act of the same session, trade combinations ceased to be subject to indictment for conspiracy, except in cases where the objects of the compact were themselves legally punishable. It is now admitted by the warmest advocates of the rights of workmen, that the state of the English law, as it affects the industrial classes, no longer presents any grievances of which they have reason to complain.

The most substantial grievance of the British workman is of a nature which cannot be removed by legislation. In the United Kingdom, after centuries of active enterprise in the pursuit of commerce, capital has been accumulated in a more ample store, in proportion

to the population, than in any other country in the world. The result is that the ordinary rate of interest is lower in England than in any other money market in Europe. The average rates for the year 1875, in the open market, were as follows:—

	Average rate of Interest for 1875
London	3 per cent.
Paris	3¼ „
Vienna	4½ „
Berlin	3¾ „
Frankfort	3⅝ „
Amsterdam	3¼ „
Brussels	3½ „
Hamburg	3¾ „
St. Petersburg	5¼ „

Money being abundant, and the rate of interest low, outlets for investment are eagerly sought for. It is in London that foreign countries, in a state of impending bankruptcy, have of late conducted their principal borrowing operations; and their appeals to a credulous and ill-informed public have not been made in vain. If, in any trade or business, whether in commerce or agriculture, in mines or in ships, at home or in the remotest regions of the earth, a return has been anticipated, ever so little beyond the low nominal rate of interest, eager and credulous people have hitherto been only too easily induced to embark their capital. A large proportion of the annual savings of the country have thus been squandered away in injudicious speculations; and, even when capital has been attracted to a legitimate trade, if the profits have, for ever so short a

time, exceeded what may be called the normal rate of interest, over-production has ensued, and the period of short-lived prosperity has been followed by a long depression. A serious fall in the value of manufactured goods has been inevitable; and the workmen, whose wages have been unduly advanced by excessive demand for their labour in prosperous times, have been compelled to submit to a reduction, or to suffer the more cruel alternative of entire loss of employment.

The recent history of the iron trade presents a striking illustration of the course of events which has here been sketched out. The circular of Mr. Müller, of Middlesborough-on-Tees, quoted in the Commercial Review for 1875, published in the *Economist*, contains the following passage:—

'The year 1875 has been a period of hard struggle in the iron trade. The crisis has been felt more severely than those of 1837 and 1866, because the iron trade had not at that time attained the dimensions it now occupies; nor were former crises preceded by such extraordinary prosperity and inflation as had been developed during 1871–2 and 1873.

'In the course of three years a great amount of capital had found its way into the iron and coal trades, helping to bring up the means of production and manufacture to the level of the exceptional demand then existing, but which could scarcely be expected to continue. When, therefore, this demand slackened, and prices declined, the burden was felt first by undertakings which had been established on the basis of

extreme ideas. It is this great and sudden prosperity which has been so baneful in its effects on all classes of society, from the workman upwards. When, in due time, the tide turns, and the reaction sets in, outside capital begins to be nervous and fidgety, and tries to get out as fast as possible. A wholesome reaction is thereby often magnified into a disastrous crisis, a short epidemic in business, which, while removing much that is weak, injures also much that is worth preserving.'

A very large proportion of the total quantity of coal raised is consumed in the manufacture of iron. After a long period of depression, the price of iron rose in 1871, to use the language of Mr. Gladstone, not by steps, but by strides, not by strides but by leaps and bounds. In September 1871, forged pig-iron was selling for 50*s.*, while coke was selling for from 10*s.* to 12*s.* a ton. In July, 1872, the forged pig-iron rose to 120*s.*, more than double the price of nine months before, and coke, following the advance in iron, rose to from 37*s.*6*d.* to 41*s.* a ton. These high prices implied a high rate of profit; and forthwith everybody engaged in the iron and coal trades applied his utmost energies to the increase of production; while new capital for the development of these industries was obtained, with accustomed facility, from the inexperienced investors who abound in an old country. The great pressure thus brought to bear on the labour market naturally caused a rapid advance of wages. In a colliery, with which I am connected in South Wales, the rise in wages in some of the principal departments is shown in the following table:—

	1863	1869	1873
	s. *d.*	*s.* *d.*	*s.* *d.*
Hewers	—	24 8	48 9
Timbermen . . .	25 0	—	53 4
Haulers	—	20 0	31 6
Landers	—	21 0	36 9
Labourers . . .	—	15 0	24 0
Average for all men employed . . .	—	20 11	36 8

It was estimated by Mr. Pease that the cost of getting coal in Durham had increased 50 per cent. between 1870 and 1872. Mr. Macdonald, the President of the Miners' National Association, estimated that the cost of getting coal in Northumberland had increased, between 1868 and 1872 and 1873, from 60 to 65 per cent.; while the selling price had increased 120 per cent.

Such an inflation of prices and wages was inevitably and promptly followed by corresponding reaction. As prices fell, the masters required that the men should accept reduced wages, and a long conflict naturally ensued. The most severe engagement was fought in South Wales, and it may be interesting to record some of the principal incidents of the struggle.

In the years 1871 and 1872 the price of coal had been increased about 100 per cent. The culminating point was reached in 1873. Happily for the consumers, the exceptional rates were not long maintained. The subsequent fall in the value was extremely rapid. Steam-coal fell from 22*s.* a ton in October 1872, to 12*s.* 6*d.* a ton in December 1874. In May 1875 the price of coal was only 39½ per cent. higher, while

the wages of the men were 60 per cent. higher than in 1870. In 1870, the average wages in the collieries were 4*s.* 2*d.* a day. In 1874, the average earnings were 6*s.* 8½*d.* a day. After a prolonged resistance, the workmen in South Wales were compelled to surrender. A deduction of wages was fixed at 12 per cent. for three months, and it was agreed that any further change in the rate should be regulated by a sliding-scale, depending on the selling price of coal. A joint committee of workmen and masters was appointed, to prepare a scheme for the proposed sliding-scale.

Thus, after a disastrous struggle representing a loss in wages to the workmen estimated by Lord Aberdare at 3,000,000*l.* sterling, the truth of the doctrine, laid down by Adam Smith, was once more confirmed, that it is only when trade is in a progressive state that wages can be increased. Strikes in a rising market are generally successful. Strikes against a falling market inevitably terminate in disaster to the workmen. 'The condition of the labouring poor is hard in the stationary, and miserable in the declining state. The progressive state of trade is in reality the cheerful and the hearty state, to all the different orders of society. The stationary is dull, the declining melancholy.'

An able writer in the Commercial Review, published in the *Economist* in March of the present year, makes some observations, which elucidate and confirm the great principles laid down in the quotation cited above from Adam Smith. 'Decreasing employment,' he says, 'has compelled the adoption of lower wages, and has enabled the employer to obtain more and better work,

for the money paid, than was possible during the exceptional period of 1871–3. Indeed, it must be remembered that our great iron and coal industries have been rendered unprofitable, not merely because wages rose inordinately, but because, as the wages rose, the quantity and quality of the work given for more money became less and less. The workshop became, in no small degree, the paradise of negligence and incapacity, evils to be cured only by the sharp physic of privation.'

In the finished iron and engineering trades, the workmen have succeeded, within the space of a few years, in reducing the hours of labour to nine a day, and they have obtained a substantial advance of wages. In our own establishment, the Canada Works at Birkenhead, the hours have been reduced, in accordance with the rule which has come into force universally in the United Kingdom; while the wages have been advanced since 1871, in the case of the fitters, from 5*s.* to 5*s.* 6*d.* per day; smiths, from 5*s.* 4*d.* to 6*s.* 2*d.*; platers, from 5*s.* 6*d.* to 6*s.* 1*d.*, and other trades in proportion.

Being anxious that the present condition of the iron and coal trades in England should be impartially exhibited to American readers, I have asked Mr. Potter, the editor of the *Beehive*, the leading journal on the affairs of our trades unions, to state the case from his point of view. The following is a letter of great interest received from him:—

'May 12th, 1876.

'Dear Sir,—I find it is not easy to obtain the infor-

mation as to the wages in the coal and iron trade you have asked for.

'*First.* Nearly every district in which coal is got differed in amount of wages in 1871, the period when the advances in the coal and iron trades began.

'*Secondly.* In each district the advances were at different times and of different amounts.

'*Thirdly.* The highest amount of wages obtained by the men differed in the different localities.

'*Fourthly.* Some started from a low level and attained to a high standard.

'*Fifthly.* In arbitrating for reductions—and all the arbitrations in the coal trade were for a reduction—the actual wages, either as a starting point, or at any stage of the advance, were scarcely ever mentioned, the percentage of advance and increase being almost the only thing alluded to. This practice, as you will see, fixed nothing, either as a starting point or resting point, over the whole scale, in rising or descending.

'In the coal trade the highest wages are earned in Northumberland and Yorkshire. Advances in miners' wages began to take place towards the close of 1871. In West Yorkshire the advances were about 59 per cent. on the prices paid in 1871; in South Yorkshire 57½ per cent., in Lancashire 60 per cent., whilst in Cheshire and the Oldham districts the advances were considerable, more perhaps, than 100 per cent., but the point from which they rose in these districts was very low. In Durham the advances were 57 per cent., in Northumberland 57 per cent. But in Scotland, where wages were very low, the advances reached 140 per

cent. In North Staffordshire the advances were 55 per cent., and in Cumberland 54 per cent.

'The general reductions have brought wages down in all the coal districts to very near the old level. But it should be borne in mind that, where the coal is used for manufacturing purposes, the wages have been better maintained, as in Yorkshire, and certain parts of Lincolnshire, and Derbyshire; whilst in other districts, where the consumption has been in connection with the iron trade, they have gone down. There are places where perhaps 15 per cent. is yet retained, whilst in other places there is scarcely anything over the wages of 1871; and if the increased cost of living be taken into account, the gain all over has not been much, and the downward tendency still continues.

'In this matter it might not be amiss to bear in mind that the miners' unions are of recent date, the greater number having been established within the last five years. They have done a great deal in regard to the general improvement of their condition; but their discipline is by no means perfect, and there is much to be done among them in the work of organisation.

'It is also worth noticing that in the trades where the unions have been more perfected, wages have not been affected by the state of trade. The Amalgamated Engineers, the Iron Founders, the Steam Engine Makers, the Iron Ship Builders, and the Boiler Makers, have not been reduced at all. These trades have obtained advantages during the years of briskness of trade, particularly in regard to reduction of hours of work, but

nothing has been given up by them, owing to the present slackness of trade.

'I may state that coal-heavers' wages, which are the best of the colliers, will not average more than 5*s.* per day, whilst some of the day workers go down to 3*s.* per day. It should also be borne in mind that miners cannot well work more than five days a week.

'It will not be far from the mark, if we say that the wages of miners in 1871 were 4*s.* per day, though in some branches they were much more. What they were at the highest will be seen by the percentages stated in this summary. The following paragraph appears in the *Times* of to-day, which will show the condition of miners' wages in Warwickshire:

'"*The Proposed Reduction in Warwickshire Miners' Wages.*—At a mass meeting of Warwickshire miners, held on Wednesday night, at Bedford, the masters' proposition for a reduction in wages was considered. The meeting unanimously passed a resolution to the effect that their present rate of wages is only 3*d.* per day in advance of the rate of 1871, and that their present working hours are as long as those of competing districts. The men, therefore, hoped the reduction would not be insisted on, it being now impossible for them to procure the common necessaries of life."'

Turning from manufactures to the cultivation of the soil, it is satisfactory to know that the agricultural labourer has shared in the generally improved condition of the labouring classes in England.

Until within a recent period, the condition of the

rural population in many districts was a dishonour to a country abounding in riches and resources of every kind. The blessings of education and political intelligence had not been extended; even now they are but partially enjoyed among the inhabitants of the secluded villages and hamlets of the agricultural districts. In their complete ignorance of any other condition of life than that which they had inherited from their forefathers, they had no definite aim or plans for the improvement of their lot. They endured their poverty with dogged submission. At length, however, the rural labourer found a powerful and eloquent advocate in the person of Mr. Joseph Arch. By arguments based upon a more or less accurate appreciation of the facts, but, in the main conclusive, the labourer was urged to ask for an advance of wages. The demands made were not extravagant. In Suffolk, for example, the men asked that their wages should be increased from 13*s.* to 14*s.* a week. This modest request was met, on the part of the farmers, by the formation of a counter association, and ultimately the labourers throughout an extensive district were locked out.

The course adopted by the employers was condemned by all impartial and thoughtful men. In one of his characteristic and sensible letters to the *Times*, the Bishop of Manchester stated the case against the farmers in plain and forcible terms. 'Could a man,' he asked, 'at the present prices of the necessaries of life, maintain himself and his family, he would not say in comfort, but even with a sufficiency of food, fuel, and clothing, to enable him to put his whole strength into

his work on a smaller income than 15*s.* or 16*s.* a week?' If the farmers said they could not afford to pay this rate of wages with their present rentals, and could prove this statement, then rents must come down, an unpleasant 'thing to contemplate, for those who would spend the rent of a 300-acre farm on a single ball, or upon a pair of high-stepping carriage-horses. But, nevertheless, one of the things was inevitable.'

The farmers succeeded for the time in their resistance to the demands of the labourers. They and their families performed the manual labour on their farm, which had hitherto been carried on by hired workmen. The results, however, of the labour movement in the agricultural class have been considerable. The labourers were defeated in their pitched battle with the farmers; but they subsequently obtained considerable advances in all those districts of England where the lowest wages had hitherto been given. Space does not permit me to follow up the labour movement in all its ramifications, in Dorsetshire and other counties. The actual position of the agricultural labour market is, however, summed up, from a unionist's point of view, in the following letters, received from Mr. Joseph Arch, and from Mr. Henry Taylor, the Secretary of the Union of Agricultural Labourers, in reply to an inquiry, which I ventured to address to them on behalf of the *International Review*.

The following is from Mr. Taylor:—

'May 9, 1876.

'I would say that we have no official statement as to rates of wages in the rural districts, and in speaking

of the rises during the past three years, we can only generalise. Having made myself intimately acquainted with the various counties in which our cause exists, I feel justified in saying that at least 3*s.* per week has been gained on the old wages prior to this movement. In North Lincolnshire the wages run as high as 21*s.*, and, coming southward, they are as low as 13*s.* or 14*s.* In Norfolk, 14*s.* or 15*s.* is about the day price for ordinary labourers, some receiving 13*s.* Carters obtain more by 1*s.*, or in some cases 2*s.*, than ordinary men; but of course, their work entails more hours, as well as Sunday duties. Suffolk is about 1*s.* under Norfolk. Cambridge and Bedfordshire about the same, or tending rather downwards. In Wiltshire there are a large number who work for 11*s.*: in fact, we have men on strike at present against that wage. Hampshire about 13*s.* Oxfordshire the same. Warwickshire from 18*s.* to 13*s.* A few miles' separation often makes a great difference in wages. Of course, manufacturing towns or public works make the difference frequently. But in other cases there is a difference of 1*s.* or 2*s.*, which is simply attributable to the spirit of the men, who in most cases are too ignorant to know aught of the labour market, or are altogether too spiritless to move, and otherwise involved in poverty. In most cases, where the union is in force, wages are better—other conditions similar—than where there is no union. This can of course be understood. The men are of more courage, because excited to move, have assistance to move, and are directed in their movements. But, migration apart, the men would get better terms if

they demanded them; but in many cases they are too timid. This is removing, however. I said there had been a rise of 3*s.* all round. I wish to keep within the mark; but I believe 4*s.* is nearer truth. And this is not all. The piece-work prices are much improved. They determine the bargain before performing the work, unlike the old custom. And then, I am assured that the independence of the men, and the liability of their moving, have caused the employers to be much more cautious and respectful in their attitude to them.'

Mr. Taylor enclosed a letter, as a sample of the correspondence in which he is hourly engaged, which, omitting names, I give as a typical case.

'May 8th, 1876.

'Dear Sir,—We saw in the *English Labourer* that Mr. Miller goes to Canada the 24th of this month, and that he wishes to take members of the union with him. We gave our names in to our secretary, and thought to go in March. I am working for ten shillings a week, and I hope I shall have the good luck to go, for I am tired of England, for we are half-starved. If the men would all be union men it would be better for all; but they hang back so here, and they that has joined more than half has left the ranks. They say Mr. Arch ought to come among us and cheer them up. I think myself if the speakers was to come often, our branch would soon grow stronger. Dear Sir, I hope you will send by return, and tell me whether it's free emigration, and whether we can be sent free. There are five of us, one boy 14 and a girl 9, and an older daughter, who

is very weakly. She earns her living by sewing. If we are to go, please send the tickets at once, as I have many things to do before we go.'

The following is from Mr. Joseph Arch:—

'Barford, Warwick: May 13, 1876.

'The wages of the farm labourers have been advanced in every county, where our Association has gone, from two to three shillings per week, viz. from 9*s*. to 12*s*. and in some parishes more, say 13*s*. and 14*s*. as in Dorset. In other counties they have risen from 10*s*. to 13*s*. and 14*s*. as in Norfolk. In my own county, Warwickshire, the increase has been from 11*s*. to 15*s*. and 16*s*.; in Wiltshire, from 9*s*. to 12*s*. and 13*s*.; and in Lincolnshire, from 12*s*. to 16*s*. 6*d*. and 18*s*. In other counties, where the power of unionism has been felt, the above-named wages have been obtained, and, as a rule, retained, employers being only able to effect a reduction where the labourers have been disorganised. It has been computed that four millions sterling more have been paid to the labourers during the last four years than were paid in the four preceding years. I cannot vouch for the statement as correct, because I have not gone into details on that point, but I have every reason to believe that it is true. The increased pay obtained has brought more comforts to the houses of the labourers than they ever enjoyed before. Better wages have reduced pauperism in the rural districts, the number of paupers being about 323,000 less, and the poor rates having fallen from 8*d*. to 3½*d*. in the pound. At Guildford, Blandford, Warwick, and in every district where the better pay has been given, the like results have

followed; of course in proportion to the intelligence of the county, as the men are better educated in some counties than in others. Take Sussex, where the education of the labourer has just been what the squire and parson have allowed it to be, where any Radical publication was denounced as sedition. That despotism has had its day; and I hope, sir, that in the paper you are about to submit to the intelligent Americans, you will not forget to mention that, with increased wages and home comforts, the English labourer has increased in intelligence.'

It is necessary, in order to complete this statement, to refer to the situation in which the farmers are placed. While wages have advanced, they have had to contend with the most disastrous seasons within the memory of man. On January 14, 1876, Mr. Clare Sewell Read, M.P. for West Norfolk, made a speech on the situation, which was quoted in the *Economist*. 'He and his friends had only a poor crop of corn; their roots were the worst he ever remembered to have seen grown in Norfolk. The hay crop had been exceedingly light, and had been secured in very bad order: and even the straw, which they thought of great value, was so indifferent, that, when it was threshed, it broke all to pieces. When he came to speak of prices, he considered they were ruinously low, having regard to the yield per acre. Prices did not apparently depend upon the amount of corn which was grown in the country, but upon the quantity of the grain which foreigners were pleased to send us, and which would increase

year by year. If the farmers had another year like that of 1875, he fancied they would see even longer and more dolorous faces than those now before them. Farmers might stand one such brunt, but they could hardly face another. If he were to sell every bushel of corn which he grew in 1875, the proceeds would not much more than pay his labour bill and half his rent; and as he should have to expend a further amount for artificial manures, he would leave the meeting to guess upon which side his banking account would be likely to stand after he had paid his rent, as he had done that day.'

Philanthropic men have sought to reconcile the apparently hopeless conflict between capital and labour, by the introduction of the so-called co-operative system. The nature of the experiment will be too familiar to your readers to make it necessary that a detailed explanation should be given. It will be sufficient to point out where the principle has been adopted with success and where it has been marked by failure. It has been successful where the business to be done was easy to manage. At the co-operative retail stores, great reductions of price and inprovements of quality have been secured to the consumers. Co-operation has been a failure in its application to productive industry. In a large factory, or mine, or foundry, where the labours of hundreds or thousands of men must be combined, in order to carry out extensive and complicated operations, discipline must be maintained, and the reasonableness of the orders given must be accepted without debate by those engaged in subordinate capacities. The

government of a factory, like the command of a regiment, must be an autocracy. Hence it is that the principle of associated effort has been found inapplicable to productive industry.

There is another reason why co-operative manufacture has been a failure. Capital is required for such undertakings. Competition has reduced the profits of manufacturers so considerably, that an establishment unprovided with the newest and most costly machinery must show an adverse balance. Unfortunately, the savings of the working classes are not sufficient to enable them to provide the capital necessary for business on a large scale. It would be unfair to the intelligent and industrious working people of England to ignore the many laudable efforts they have made to raise their material and their social condition. The benefit societies, the post-office savings bank, in which the savings of the poor are accumulated at the rate of a million and a half a year, the building societies, and the co-operative associations, attest the prudence and the thrift of multitudes, who cannot save money without self-denial. On the other hand, the returns of the consumption of spirits and beer in the United Kingdom show that the surplus earnings of prosperous times are largely consumed in pernicious indulgence. The consumption of British spirits increased from 24,000,000 gallons, in 1871, to 30,100,000 gallons, in 1875; while the number of bushels of malt consumed was increased in the same period from 54,000,000 to 62,000,000. It has been computed that 100,000,000*l.* a year are annually expended in the United Kingdom in drink.

If any appreciable proportion of this vast and deplorable outlay were devoted to industrial investment, the working classes might become more independent than they are of the aid of the capitalist.

There is, however, another, and a more practicable, form of co-operation, namely, that of payment by results. During the past winter, this subject has excited much interest, in consequence of the protracted strike of the workmen belonging to the Amalgamated Society of Engineers who were in the employ of Messrs. Easton and Anderson, at Erith. It had been urged by the officers of the Society, first, that the practice of piece-work placed the men under the tyranny of what was called the 'butty,' or piece-master, system, and that the workman under this system did not get his share of the results, as it was monopolised by the piece-master; secondly, that it frequently happened that workmen actually found at the end of a job on which they had been engaged, that they were in debt to their employers, inasmuch as they had not earned the full amount of their weekly rated wages, and were forced to pay the deficiency; thirdly, that the results were, when equally distributed, small in amount, and that actual earnings were reduced by the system, as wages were brought down by this process to the lowest possible point. These allegations have been carefully examined by Mr. Stark, Fellow of the Statistical Society, of London, and the result of an inquiry shows that, of 97 employers from whom information was obtained only 15 pay through a piece-master; that a deficiency hardly ever happens;

and that the additional earnings vary from 15 per cent.. to 75 per cent. on the weekly ratings! The lower earnings are exceptional, and are confined to small concerns. The weekly ratings are higher in districts where piece-work most obtains, than where it is never practised; and the percentage additions on piece-work balances are highest in those shops where the weekly ratings of the men are also on the highest scale. It would therefore appear that the best workmen are found where piece-work is the established practice.

While piece-work is strongly resisted by the Association of the Amalgamated Engineers in its corporate capacity, and by a certain proportion of the workmen is much disliked, in many important districts the men who have learned its value to the able and industrious mechanic would strenuously oppose any proposal to limit its operations.

Piece-work has been strongly advocated by the most generous friends of the working classes. Among their number, I would specially refer to Mr. Mundella. In a speech, delivered in London, on March 20, he delivered the following opinion on the subject:—'He was an advocate of piece-work: of the 240,000,000*l.* a year of English exports, he believed he was right in saying that fully 90 per cent. were made by the piece. Of textile manufactures they exported, in 1874, 120,000,000*l.* worth, and these had all been paid by the piece. So it was with iron and steel, to the extent of 31,000,000*l.*; and also with coal, cutlery, haberdashery, and other small articles, all of which, so far as practicable, were produced under the piece-work system.

There was more piece-work, he maintained, done in England than in any other country in the world; and the more it was extended the better for the workmen, whether they liked it or not. Scamping was as often done under the day-work as under the piece-work system; for the master could push the men under both, and urge them to "slip" it. The question on that point was, what amount of money was the master prepared to pay, and what superintendence did he give as to quality? Piece-work tended to regularity of work and the weak were better off by it: for in slack times these were, under a day-work system, the first to be dismissed. In conclusion, he made his earnest protest against any attempt to resist piece-work, when it was honestly practicable.'

Another eminent authority on the labour question, Mr. Frederic Hill, brother of Sir Rowland Hill, who holds a high permanent position in the Post Office, and is an entirely disinterested observer, remarks, in a recent address:—'The stimulus to ingenuity and exertion given by piece-work is, I have no doubt, one cause of the general superiority of English workmen over those of the Continent. It is well known that the rate of wages here is considerably higher than on the Continent; and yet English manufacturers are seldom induced to transfer their establishments to the Continent in the hope of getting their work done more cheaply; because, owing to the greater energy and activity of Englishmen, their higher wages are fully compensated for by greater production. In nothing, perhaps, has this English superiority been more manifest than in the railway

work of navvies; in which, under the gang or butty system, the rule of payment according to the quantity of work done, instead of by time, is, I believe, almost universal; and we have the satisfaction of knowing that the example thus set to Continental workmen has produced the happy effect of raising their wages and permanently benefiting their condition.

The comparative efficiency of the English and the foreign workman has been much discussed in the present hard times, as it always is when trade is depressed. The truth is that there is little difference between the amount of work performed for a given sum of money in any of the manufacturing countries of Europe. The English workmen became idle when their wages were raised and their hours of labour curtailed; but I have faith in their skill and physical power, and in their common sense. They are not likely to allow themselves to be beaten in a fair and open competition. The best evidence of the excellence of the British workman is afforded by the high tariffs which, in many countries, where the wages are lower and the hours of labour longer than with us, it is thought necessary to impose, in order to give effectual protection to native industry. If there were no protective duties, our iron-work would be extensively imported into France, Russia, and the United States, whence now it is only excluded by prohibitive imports.

The present depression of the iron trade is not confined to England. The *Economist* gives a gloomy picture of the state of this trade on the Continent. In Germany also there has been over-production.

Wages have risen as rapidly as in England. Good workmen have become careless; and the general standard of diligence and workmanship has declined. In Belgium more than half the blast furnaces are standing idle. Such a description as this is even more discouraging than that given of the trade in England. 'Our faith,' then, 'is large in time.' The growing mechanical genius of some countries may make them independent of England, but other markets will open out elsewhere. We know not what may be the future demand for our productions in Japan, in China, and in Africa.

It is idle to find fault with trades unions. When men came to be employed together in numbers so vast it was natural that they should combine to promote their mutual interests. It is better to recognise these organisations, and to make use of the facilities they afford for negotiation and agreement between employers and their workpeople.

Even in the most prosperous times there are multitudes who have to fight a hard battle in the daily struggle for life. Side by side with the colossal fortunes accumulated in successful enterprise it is sad to see so many human beings without sufficient food or raiment. The affluent may strive to satisfy the conscientious scruples of their position by lavish doles to the poor. But this is not enough. Indiscriminate alms create more misery than they relieve, and their distribution requires an amount of careful inquiry that is not commonly bestowed. To the rich it is easier to be lavish of their money than to devote their time to the

practical work of charity. The poor, however, have a claim to both; and a full and generous recognition of that claim can alone dispel the bitterness and the envy, which an ostentatious display of wealth cannot fail excite.

In discussing the condition of the labour question in England, it has been impossible to suppress all allusion to the industrial competition between our country and the United States. We are now rivals only in the arts, the sciences, and commerce. The people of England and the United States are bound together by many ties, by their common ancestry, by their language and literature, and by the laws and the liberties they enjoy. The natural attachment, which ought to unite them, was never more sincere; nor are there any clouds on the farthest horizon to overshadow the pleasant prospect of amity and peace between the great Anglo-Saxon nations.

LECTURE IX.

ON CANADA AND THE UNITED STATES.

DELIVERED AT THE HASTINGS MECHANICS' INSTITUTE IN 1873.

In the following Lecture it is proposed to invite your attention chiefly to the prospects of emigrants from Europe to North America. As the principal field of emigration for the redundant populations of the Old World, America is a country of surpassing interest.

We are only too familiar with the difficult problem of pauperism. Our pauper population may be numbered by hundreds of thousands—a truly melancholy spectacle, when seen side by side with the wealth and luxury of our age and country.

Who can tell what would have befallen us but for the vast emigration, which has taken place from our shores?

Between 1815 and 1871, both years inclusive, 7,266,000 persons emigrated from the United Kingdom. Of these 1,424,000 went to the American colonies, and 4,671,000 to the United States. Emigration was most active between the years 1850 and 1854. Since the latter date it has fluctuated with the commerce of the country, having always been most con-

siderable in years when it has been most difficult to obtain steady employment at home. Of late there has been a considerable decrease in the number of Irish and a corresponding increase in the number of English emigrants. In 1864 the numbers of English and Irish emigrants were 56,618 and 115,428 respectively, or in the proportion of 33 to 67; in 1869 they were 90,410 and 73,225, or in the proportion of 55·27 to 44·78. Nevertheless, as compared with the population of the country, Irish emigration is still much greater than either the English or the Scotch, the proportion in 1871 having been of—

Irish . . .	1·31	per cent. of the population.
English . .	·45	„ „
Scotch . .	·57	„ „

In 1870, of the whole number of emigrants 198,843 went to the United States, and only 32,671 to British North America. It is to be regretted that so many of the most valuable of our population have ceased to be British citizens; but it is, as the Emigration Commissioners observe, an inevitable consequence of the extent of our emigration. Canada cannot at present absorb more than from 30,000 to 40,000 emigrants a year. There are two special obstacles to extensive emigration to Canada. The first and most serious is the severity of the climate. The winter lasts at least two months longer than in the States, and it is infinitely more severe, putting a stop to all agricultural occupations. The other difficulty is the want of railroad communication with the remote but fertile districts in the Far West. In the Red River Settlement, Indian

corn, wheat, barley, oats, flax, hemp, turnips, tobacco, &c., can be readily grown; but there is no means of taking the produce to market. A project has been set on foot for establishing a line of railway through the Canadian Dominion to the shores of the Pacific. It is doubtful if it could be carried into execution, without an Imperial guarantee. In the present state of public opinion at home on these subjects such a guarantee would be given with much reluctance; and no assistance would be given by the Imperial Government to the numerous subordinate railways, which it would be necessary to construct as tributaries to the main artery of communication.

As a set-off against the drawbacks, which have been alluded to, Canada has the great advantage of cheap food; while the wages for all who can find employment are as high as in the United States.

Skilled farm hands get from 30*l.* to 40*l.* a year, with board. Common labourers earn from 5*s.* to 6*s.* 3*d.* a day, and skilled artisans from 6*s.* to 16*s.* a day. It should be observed by way of caution that employment cannot be obtained at these rates during the five or six winter months.

The prices of some of the principal articles of food are as follows: The four-pound loaf of white bread costs 5*d.* to 6*d.*; salt butter, 5½*d.* to 6*d.* per pound; meat, 3½*d.* to 5*d.* and 6*d.*; cheese, 4½*d.* to 7½*d.*; potatoes, 1*s.* to 2*s.* per bushel; eggs, 6*d.* to 9*d.* per dozen; milk, per quart, 2½*d.* to 3*d.*; beer, 2*d.* to 5*d.* per quart; tobacco, 1*s.* to 2*s.* per pound; and other articles in proportion.

The facilities for obtaining land in most of the Canadian provinces are not equal to those accorded to emigrants in the United States. Still the price of land cannot be considered immoderate. The lands in the Province of Manitoba and the North-West Territory are held by the Dominion Government, which at present gives free grants of 160 acres, on the condition of settlement. Dominion lands in other provinces are sold at 4*s.* 2*d.* an acre.

The physical geography of the North-West Territory may be appreciated, when it is mentioned that a light gig may be driven for a thousand miles, in a straight line, in the open prairie, over land well adapted to the production of wheat.

It may be interesting to you to know that in 1821 no less than 702,000*l.* were remitted by emigrants from the United States and Canada to their friends in the Old Country, of which the sum of 310,000*l.* was in the form of prepaid passages. The above remittances are believed to have been made almost exclusively by Irish emigrants to their relations in Ireland.

Turning to the United States, the vast area of country comprised within its limits may be divided into three great regions—

1. The Mississipi slope, between the Alleghanies and the Atlantic Ocean.

2. The Mississipi basin, between the Alleghanies and the Rocky Mountains.

3. The Pacific slope, between the Rocky Mountains and the Pacific Ocean.

These three divisions embrace an area of 3,034,459 square miles, of which 2,867,185 square miles were originally in the hands of the Government.

Under the liberal system, introduced under the Homestead Law, the settlement of the wide tracts still unoccupied is proceeding with marvellous rapidity.

Any individual who is a citizen of the United States, or has taken the initiatory steps to become a citizen, can secure a grant of 160 acres of land upon the mere payment of office fees, amounting to from 2*l.* to 4*l.* To obtain a complete title, the land must be cultivated for five consecutive years. Only one homestead privilege is allowed to a single individual; and thus the evil effects of an excessive monopoly of the soil are avoided.

The rapid extension of railways has supplied the ready means of access to great districts of the West, which must otherwise have remained desert, and has materially increased the tide of emigration. Already the emigration from Europe has led to the formation of vast communities in the United States, which promise to become, at no distant day, young nations, retaining the distinctive language, customs, and national characteristics of their forefathers in the Old World. There are now resident in the State of New York alone 110,000 English, 530,000 Irish, and 317,000 Germans. The City of New York is actually the second largest Irish and the third largest German city in the world.

In order that some appreciation may be formed of the prospects of emigrants in the States, I will quote

from the recent report of Mr. Archibald, the British Consul in New York, the rates of wages paid in that State, and compare with the earnings of the labourer the cost of some principal articles of food.

Let us take a few representative trades in the great manufacturing industries. Weavers in cotton mills earn 32*s.* a week, or 39 per cent. more than the corresponding wages in England. The average excess of wages paid in the cotton mills, in 1869, over the rates in Great Britain was nearly 40 per cent. In woollen mills, weavers earn on an average 34*s.* 4*d.* a week; and the wages of all the various classes of operatives averaged 25 per cent. above the corresponding rates in England.

In iron foundries and machine shops the weekly wages of some of the principal trades are as follows:—

	£	*s.*	*d.*
Iron moulders	3	7	0
Machinists (ordinary)	2	15	8
Boiler makers	3	2	0
Do. helpers	1	15	0
Riveters	3	1	0
Blacksmiths	3	10	0
Engineers	2	17	0
Millwrights	3	18	0

The average excess of wages in this industry over the corresponding wages in England is 86 per cent.

In agricultural industry experienced hands earn in summer, without board, 9*s.* 2*d.* a day, and in winter 6*s.* Ordinary hands earn in summer 7*s.* 5*d.*, and in winter 4*s.* 4*d.* The wages of able seamen, shipped

at the port of New York, are 6*l.* 12*s.* a month, nearly double the usual rates in England.

The demand for good domestic servants is always greater than the supply. Female cooks of very ordinary skill obtain from 3*l.* 10*s.* to 5*l.*, and housemaids from 54*s.* to 60*s.* a month.

With regard to the purchasing power of money in New York we must not be surprised to find that it is seriously diminished by the high price of labour, the protective tariff, and the large issues of inconvertible paper currency. House rent, fuel, woollen clothing, and medicines are 100 per cent. dearer than in England. Articles of hardware are 60 per cent., earthenware and glass ware 20 per cent., cotton clothing, sugar, and tea 10 per cent. dearer. On the other hand, salt pork, a description of food largely consumed by the working classes, is about 25 per cent. cheaper, while beef, bread, butter, and cheese average about the same in both countries. The average cost of living for a skilled labourer with a family exceeds by about 70 per cent. that of the same class in England.

Of unskilled labourers those who fare best in America are domestic servants, and they are the largest depositors in the savings banks.

Mr. Archibald entertains the opinion that the difficulties originating in the high rates of wages have been successfully overcome in America in many important trades. More work is got out of labourers, whether skilled or unskilled, than in England. There is vastly less drunkenness and waste of time. An eminent American shipbuilder, who has recently visited the

shipyards of England, has stated that our joiners' work costs twice as much as the same work in America.

In concluding this part of my lecture I may express an opinion, which is endorsed by the same competent authority to whom I have so frequently alluded, that the prospect of becoming proprietors of land, the greater social equality, the advantages of education for children free of cost, and the political privileges consequent on naturalisation, will always offer irresistible attractions to large numbers of our fellow-countrymen. The most energetic and skilful of their number will find opportunities of advancement, which do not exist at home. The British Consul at Baltimore has given two illustrations in point. The son of a tenant of 4 acres upon the estate of a nobleman in Ireland emigrated to the States in 1848. At first he worked as labourer in a foundry, but afterwards he became a gardener. In 1870 he transmitted to Ireland money enough to purchase his landlord's castle; and at the same time he owned a sugar plantation on which he had spent 40,000*l.* He had also a fine farm and a handsome town residence. In another case an emigrant from a British possession, who cannot write his own name, has become by steady industry worth over 20,000*l.* He is not a penurious man, but on the contrary charitable in the highest degree. These cases, however, are exceptional; and those who are fairly well-off in the Old Country will not find it easy to improve their condition by emigrating to America.

The best field for the emigrant is the Far West.

But in the new settlements in the wide solitudes of the prairies many of the amenities of our advanced civilisation are necessarily wanting. The acquisition of wealth may be dearly purchased, when the advantages which it commands in older countries cannot be enjoyed.

I now proceed to offer a few observations on the social condition of the American people. The universal diffusion of education is one of the happiest features of American life. Attendance at school is the universal practice, and in many States has been made compulsory by law. The schools at Boston, and all those connected with the manufacturing establishments, which I had an opportunity of visiting, are altogether admirable. The buildings, the system of instruction, the teachers, all are models truly worthy of imitation in England. The teachers in the normal schools for girls, and in the lower schools for boys and girls, were young women of singular grace and refinement; and their intellectual powers were abundantly manifested in the manner and the matter of their teaching. The difficulty of intermixing children of all grades of society in the same school, which has been regarded with so much apprehension by some members of the London School Board, has not been felt in America.

It is doubtless to the general education of the people that we may attribute the failure in America of the advocates of those Socialistic heresies, which find a too ready acceptance in Europe. The general education of the people is essential to good government in a republic. In America, however, the authority of the

Government is but little felt by the masses of the people; and, happily, they are too intelligent to require either its guidance or control.

In the States the pursuit of commercial enterprise, as is natural in a new country, in which there are comparatively few persons who have inherited independent means, absorbs the whole energies of the people. Hence, while there is no ignorant class, and instruction of a high order is widely diffused, the number of those who have devoted themselves to literature as a profession or an occupation is comparatively small. The want of a literary profession is most manifest in the inferior quality of the periodical literature. The newspapers especially, while all the mechanical arrangements of the establishments are admirable, are often deficient both in literary power and political wisdom. It must not be inferred from these remarks that there are no good newspapers and no literary taste in America. Our most eminent authors are read as extensively as at home. The taste for reading is almost universal.

In some cities, and especially in Boston, where the influence of the neighbouring Harvard College has been most valuable, all classes, including in an eminent degree the mercantile community, are highly cultivated. Perhaps no character in society is more charming than the cultivated merchant, who possesses both the refinement, the knowledge, and the graceful imagination of the man of letters, combined with the practical experience of the man of the world. This felicitous combination is often found in Boston society.

I must not dismiss this branch of my subject without rendering my humble but sincere tribute of praise to the ladies of America. They have taste in dress, personal beauty, charming manners, and high cultivation. The general impression, which must remain with all who have mixed largely in American society, must be highly favourable to our fair cousins on the further shores of the Atlantic.

Nothing is more interesting to us to know, nothing is so difficult to ascertain, as the real state of public feeling in America towards England. In some quarters doubtless the old jealousy exists. Especially among the Irish section of the population of the United States there is an hereditary and unreasoning hostility towards England. It is not agreeable to draw an indictment against a nation; but our experience of the difficulty of maintaining the authority of the Government in Ireland is not without its counterpart in the experience of the great American Republic. It seems impossible to infuse into the minds of the Irish people, even by the largest concessions of political liberty, that natural love of order and allegiance to their Government, which are essential in a free state.

While, therefore, it must not be supposed that England has no enemies in America, we may confidently believe that among the more numerous and influential sections of the American people there is a strong attachment to the old country. Time is necessary to remove completely a long-standing jealousy. But I have been assured by those who know America well that, if England were unjustly assailed by a combina-

tion of the Continental Powers, a feeling of sympathy would immediately be aroused in the United States, and that we should find in that country a faithful and most powerful ally. The attachment to the Queen, so deeply and universally felt in the United States, is a proof of the many close and indissoluble ties which bind the two countries together.

The reference of the 'Alabama' claims to arbitration may be accepted as a happy omen for the future. Surely it gives us cause to hope that the benign influences of Christianity are beginning to exercise a stronger control than heretofore over the evil passions of mankind, when the two great nations of the Anglo-Saxon race—both too professing the Protestant faith—have led the way in accepting a peaceful adjudication upon questions in dispute which, in a former age, would not have been settled without an appeal to arms.

It is alleged that in accepting an arbitration we have destroyed the *prestige* of our own country. I differ from this opinion. I am no lawyer, but I am convinced that we were in the wrong. The 'Alabama' had been constructed not only in violation of our own statute law but in defiance of the Queen's recently issued proclamation. It was surely inconsistent to give to such a vessel a hospitable reception in our colonial ports. All our differences being now adjusted, it is the duty of every English and every American patriot to exercise whatever private or public influence he may possess, in order to preserve an intimate alliance between the two countries. The United States have received from us their religion, laws, language, and

literature. They have given in return to innumerable emigrants from our shores a hospitable reception, and happy homes. These are mutual benefits, of which the wise and thoughtful men of both nations will never be unmindful.

LECTURE X.

WORK AND WAGES IN 1877.

TRADES UNION CONGRESS, LEICESTER, OCTOBER 1877.

BEFORE I enter upon more important topics I desire to express my high appreciation of the honour of being invited to address the delegates from the Trades Unions at their annual Congress. Connected as I am with the employers of labour, you cannot expect me to come here to encourage an aggressive movement against men of my own order. All that you can ask from me is that I shall hold in my hands the equal scales of justice as between capital and labour.

I have before had occasion to vindicate the character of the English workman from unmerited strictures. I hear the same charges renewed to-day, and again I ask for evidence to prove that the English workman is deteriorating; and first, let us ask ourselves, has the volume of our trade diminished while that of other nations has increased?

This question may be satisfactorily answered by a reference to Mr. Leone Levi's *History of British Commerce*. It is there shown that while we export produce and manufactures of the value of 6*l.* 3*s.* 2*d.* per head of our population, France exports at the rate of

2*l.* 18*s.* 8*d.*, and Italy at the rate of 1*l.* 4*s.* 8*d.* per head. Our trade doubled itself in the fifteen years 1855–70. The exports and imports in 1870 amounted to 547,000,000*l.*, and the progress has been so well sustained through the period of depression, from which we have not yet by any means emerged, that in 1876 the total amount had grown to 631,000,000*l.* Mr. Levi very truly observes, in commenting on these remarkable figures, that what gives an open market to British merchandise all over the world is its universal adaptation to the wants of the populations of every climate. Luxuries are useless to the masses of mankind, but calico, iron, and hardwares are necessaries even to the least civilised peoples. The demand for these articles of universal necessity would not be supplied almost exclusively from England unless our labourers were, as he says, 'really good workers.' Wages may be higher here than elsewhere, but the labour performed is cheaper, from its greater effectiveness, and from the saving of unnecessary supervision.

Let us now examine the effects of recent treaties of commerce on international European trade. A valuable paper on this subject was read by Mr. Leone Levi in December last before the Statistical Society. Let us take the trade between the United Kingdom and France as an illustration. By the treaty of 1860 France engaged to abolish all prohibitions, and to admit certain articles of British manufacture at duties not exceeding 30 per cent. *ad valorem*, to be further reduced to not exceeding 25 per cent. in October 1864. Great Britain, on the other hand, consented to abolish duties on

French silks and other manufactured goods, and to reduce the duties on French wines. What have been the results of the treaty? It is true that our imports from France have risen from 17,000,000*l.* to 47,000,000*l.*, but our exports to France, in spite of the heavy duties to which our goods are subjected, have increased to the extent of 185 per cent.

These figures show both the growth of our trade generally and the ample share of advantage which we have secured under commercial treaties. That success could not have been attained except by the co-operation of skilful labour with well-directed capital. The English workman may, therefore, claim to share with his employer the merit due to that combination of cheapness of cost with excellence of quality, which has secured for us the pre-eminence we enjoy in the export trade of the world. Grave faults are imputed to our working classes, and their conduct in many instances deserves censure. But, when we look abroad, we hear exactly the same complaints under the same circumstances. For information on the relations between labour and capital in foreign countries I would refer more especially to the admirable reports of our Secretaries of Legation and Consuls. Sir Henry Barron's report on Belgium in 1872 describes the condition of that country in a period of unexampled prosperity. A great rise in wages had taken place, but the improvidence of the people was aggravated with their prosperity, and there was an actual decrease in the deposits in the savings banks. Pig-iron doubled in value in six months; but the prices of labour and materials rose to such exorbi-

tant rates as to absorb the whole profits of the trade. The zinc, glass, and woollen industries have passed through crises of equal severity.

In Germany, during the period of universal inflation between 1871 and 1872, wages were advanced not less rapidly than in England. It was a period of immense profits all round. The make of iron was increased from 1,500,000 tons in 1871 to 2,250,000 tons in 1872. In the prices of coal and pig-iron there was an advance of 100 per cent. The rise of wages in all branches of trade was 37 per cent. over the average of former years, and the prices of all the raw materials of industry were 50 per cent. higher. Unhappily, this great prosperity brought about no permanent improvement in the condition of the industrial classes. High wages and the large profits of manufacturers caused a general rise in prices. The cost of living was increased to such a degree that the workmen were but little better off than before, and money was more freely expended in intoxicating liquors. I must confine myself to a single example in order to show what alternations of misery and want were experienced in Germany. The case is taken from the report of Mr. Savile, Chief Clerk of the Treasury Department of the United States, and is published in a volume on *Labour in Europe and America*, compiled by Mr. Young, Chief of the Bureau of Statistics of the United States. Mr. Savile describes how, at Chemnitz, a great manufacturing centre, the advance of wages from 1870 to 1872 was accompanied by a still greater advance in the cost of living. When the commercial reaction ensued wages fell 25 per cent.;

but there was no corresponding fall in the price of food, and widespread misery was the inevitable consequence. The meagre dietary of the people did not include meat more than once a week. A few touches will sometimes produce the most striking effect in a picture; and an audience of English workmen will probably appreciate most fully the low standard of living to which the people had been reduced, when it is mentioned that Mr. Savile refers in hopeful terms to the establishment of a market at Chemnitz for the sale of horse-meat, which, being comparatively cheap, gave them more for their money, or enabled them to get meat oftener than formerly.

In the large towns of Germany there is a widespread though morbid spirit of disaffection to the political and the social organisation under which they live. The Socialist agitation is described as a purely negative opposition to the existing order of things, and to every proposal of reform. It opposes popular education, and it is indifferent to political progress. The only exception to this negative policy is the tendency to encourage strikes.

It is not necessary to insist at greater length on the existence of troubles elsewhere. The burden we have to bear is not lightened, because a heavier load is imposed on others. I shall, therefore, proceed to examine the statement, which is so often repeated, that labour is dearer in England than on the Continent.

It is assumed that, because the scale of wages is higher, there is a corresponding difference in the net cost of production. It is certain, however, that low

wages do not necessarily imply cheap production. The melancholy condition of certain branches of trade in Belgium has been already adverted to, and yet in Belgium the wages of the mill operatives have been reduced so low as scarcely to cover the cost of subsistence in cheap seasons, and to leave the workman with an inevitable deficit in dear seasons. Not more than 40,000 workmen in the whole country have accounts at the savings banks.

Hitherto I am convinced that, in those trades where we are exposed to foreign competition, the English workman has, in the main, performed an amount of work fully proportionate to the difference of wages in his favour; and the fact that we are running a close race in some branches of trade with a country where higher wages prevail than those earned in England is a proof that the cost of labour is not correlative with the scale of wages.

A recent return of the import duties levied on articles of British produce shows conclusively that foreign producers, notwithstanding the nominal cheapness of labour abroad, are afraid of free competition with our own manufacturers. The following are a few figures taken from the return in question:—

Articles	Russia	Germany	Belgium	France	United States
	Per cent.	Per cent.	Per cent.	Per cen	Per cent.
Cotton yarns . . .	38	7	7 to 19	—	75
Jute (canvas and sacking)	10	5	10	11 to 26	30 to 40
IRON.					
Pig	17	free	7	27	42
Bar	50	—	5	35	67 to 100
Rails for railways . .	28	—	5	35 to 50	46 to 83

The United States afford very striking evidence of the extent to which the influence of a high rate of wages on the cost of production may be neutralised by superior organisation, by superior industry in the worker, and by the substitution of mechanical for manual labour. The small arms for the Turkish army have been largely supplied from the United States. The ability of the Americans to compete with the makers in this country in the manufacture of an article, in which so much labour is employed, is a very significant circumstance. In cases where the raw material is the largest factor in the total cost—as, for example, the timber in a wooden ship—it might have been readily understood that we, who have no virgin forests, should have been unable to build wooden ships as cheaply as they can be produced in Canada or New England. But in the case of small arms there are no circumstances which are specially favourable to the United States; and Mr. Stanley James, quoted by Mr. Young, calculates the wages of mechanics in the Eastern States and the large cities of America generally as 100 per cent. higher than in England.

With regard to the comparative rates in the principal trades in the United States, Mr. Lothian Bell, in his report on the iron exhibits at the Philadelphia Exhibition, gives the following table of daily wages as the result of many inquiries in 1874:—

Trades	United States			North of England
	Highest	Lowest	Average	Good men
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Carpenters . . .	12 3	5 7	9 0	5 0
Smiths . . .	13 2	6 2	9 5	6 0
Bricklayers . .	18 10	7 6	12 3	5 6
Machinists . . .	11 3	7 6	8 3	5 10
Enginemen . .	—	—	6 6	5 6

In America, as in England, it will be observed that the building trades are disproportionately paid. The reason is the same in both cases: the demand is essentially local, and wages are given, which could not be sustained, if the price could be determined upon a balance of demand and supply distributed over a wider area. In all trades, which are subject in any degree to the influence of foreign competition, the American workmen are conscious of the necessity of working hard and well, in order to keep up the high wages which they are at present earning. I do not shrink from telling the representatives of English labour, whom I see before me, that any rules and regulations whereby the native vigour of the British workman is restrained, must in the end prove fatal in their consequences. No doubt the effects are less baneful, in a commercial point of view, in the building and other trades, which are not brought face to face with foreign competitors. But, considering that improved dwellings are so urgently needed for the working classes, the unwisdom of imposing rules and restrictions, tending to augment the cost of building, must be patent to all.

These remarks may be enforced by a reference to Mr. Lothian Bell's comparison, made in 1874, of the net cost of labour in the coal mines in the United States and England. The American miners earned on the average 9*s.* a day. They worked for ten hours, and extracted six tons of coal. The average earnings of the English miners were 5*s.* 2*d.* a day, spending about seven hours in the pit and six in actual work. This was equal to 1*s.* 2*d.* per hour, for which the quantity worked was about 11 cwt. Miners in the United States got about 13 cwt., and were paid thirteenpence an hour. It is admitted that this comparison is not complete, unless the relative facility of extraction is taken into consideration; and the work is generally easier in America than in England. Still the fact remains that, while the daily earnings in America were greater, the hours were longer, and more work was done for a given sum of money.

Provided the necessity of keeping down the cost, so as to be able to compete with other producers, is duly recognised, and the cost of living is not raised to such a point that the workmen are actually poorer than before, as in the case already quoted of the manufacturing population of Chemnitz, the working classes are clearly justified in seeking to better their condition. If they prefer to avail themselves of the advantages derived from an increased demand for their labour, by shortening the hours of work, with a view to secure a little more leisure—leisure which, wisely used, will tend to raise their intellectual and moral condition—they are not more deserving of reproach than the successful

employer, who wisely prefers to give less time to business and more to nobler things. In either case it is a question of fitness of opportunity. Most certain it is that a state of apathetic resignation is a condition very detrimental to the interests of capital, and truly melancholy to the labourer. In Mr. Young's volume the manufacturing population of Silesia is described as destitute of any aspiration to better their condition in life, while the monotony of their daily toil produces an inordinate longing for enjoyment. The United States Consul thus describes the people of Chemnitz: 'A stupid nature and dull ambition, with the inborn idea that they will labour all their lives, as their fathers did before them, make the working class of some portions of Germany perpetual slaves to poverty, and the day is very far off when they shall be emancipated from thraldom.' It is because it is so important to inspire workmen with the hope of bettering their condition that I have always advocated the principle of payment by results. My father entertained the firmest convictions on this point. I know that many trades unions object to it, on the ground that payment by the piece leads to overwork and bad workmanship. The answer to this is, that whatever may be the particular form of payment, whether it be by piecework, contract, gratuity for extra diligence, or percentage upon profits, it is essentially necessary to give to the workman a personal motive for exertion. This must come from the prospect of participation in the profits which have been earned by his labour. His share in those profits should, of course, be proportionate to the amount of labour which he has contributed.

The success of the most flourishing establishments is generally due to the personal supervision of the proprietor, and to the liberality with which the profits of the business have been shared with the foremen and workmen. The celebrated Mr. Krupp has been a generous employer, and his success is largely due to his wise liberality.

I need not refer to the practices of intimidation and picketing. Against such offences we appeal to the law; and I propose to confine myself to the labour question in its commercial aspects. Have you ever considered how extremely moderate are the rates of interest on English investments? You cannot have a more conclusive proof of this assertion than that which is afforded by an analysis of the dividends paid on railways. The share and loan capital of the railways of the United Kingdom forms an enormous total of 630,000,000*l.* The average amount of dividend or interest returned for 1875 is represented by the modest figure of 4·54 per cent. The rates of interest on preferential capital, being more uniform than the dividends on ordinary shares, afford the most accurate gauge of the ordinary returns on English investment, which present no speculative features. The most secure form of preference is that known as debentures or debenture stock. The process of converting terminable loans into debenture stock has of late been going forward with rapid strides. The amount increased from 67,000,000*l.* in 1871 to 123,000,000*l.* in 1875. In the same period the rate of interest on these investments was reduced from 4·25 to 4·18 per cent. The fact that debenture stocks, bearing only 4 per cent. interest, can be issued by

our railway companies, at the rate of 16,000,000*l.* a year, must be a positive proof to the working classes that they are not overcharged for the use of capital.

This fact might be established upon evidence of a still wider and more conclusive kind than that afforded by the prices of railway securities. We might refer, for example, to the average Bank rate of discount. The rate for each year since 1867 has been as follows: $2\frac{1}{2}$, $2\frac{1}{4}$, $3\frac{1}{4}$, $3\frac{1}{8}$, $2\frac{7}{8}$, $4\frac{7}{8}$, $4\frac{3}{4}$, $3\frac{3}{4}$, $3\frac{1}{4}$, and $2\frac{5}{8}$ per cent. If the secure profits of business had been greatly in excess of the Bank rates, there would have been less money on deposit, and higher rates would have been charged for banking accommodation.

Here let me remind you of the elementary truth in political economy, that it is when capital is relatively abundant, and labour relatively scarce, that wages tend to rise. Reduce the supply of capital, and the reward of labour must inevitably fall. Capital, except where it is invested in the permanent form of land, or the plant and appliances of a manufacturing establishment, is absolutely free to flow into any channels which the investor may select. It will flow abundantly into those countries where, under equal conditions as regards security, the highest rates of interest are obtainable. There is an international competition for the use of capital. The New World, which offers to the working man an El Dorado of high wages, is bidding high for the use of the capital accumulated in the older countries of Europe. No less than 75,000 miles of railway have been constructed in the United States. A very large

proportion of the enormous capital required has been raised in Germany and the United Kingdom upon terms much more favourable to the capitalist than are obtainable here. Setting aside the speculative stocks, the rates of interest obtainable in the United States, as compared with the United Kingdom, on a first-rate security, may be taken to be as six to four. Fortunately for the English workman, there are some considerations apart from the rate of interest which make in his favour. If these did not exist the depletion of capital in this country would become a very serious question.

I have spoken of the faults of the workmen. But in fairness I am bound to say that the present depression of trade cannot be wholly laid or indeed mainly to their charge. If we examine the recent labour movement historically, it will be seen that in order of time the inflation of trade preceded the inflation of wages. The demand upon the labour market became in consequence more and more urgent; and when, by the natural operation of supply and demand, the labourer had gained the command of the situation, he, in many instances, assumed a dictatorial tone, and gave a smaller return both in quantity and quality of work for the increased wages that were earned. The capitalist, however, must bear his share of responsibility.

In the discussions on the state of trade and the causes of the prolonged depression throughout the commercial world the exorbitant price of labour is continually referred to. We hear but little, on the other hand, of the share of blame, which rests upon the capitalists, the employers of labour, and the investors

and lenders of money, who overstock the markets and cause goods to be sold at ruinous prices, and who, by encouraging speculative building, have raised the wages of tradesmen to their present level. I offer no opinion as to the sufficiency of the wages now paid in the building trade; I merely point out that the scale has been sustained, not by the restrictive action of the trades unions, but by the active employment of capital in this branch of business. For the sake of brevity it will be necessary to confine ourselves almost exclusively to an examination of the recent history of the iron trade.

In America the panic in the iron trade began to manifest its approach in 1873. Mr. Lothian Bell tells us that the ironmasters complain that the construction of railways had been encouraged, in the period more immediately preceding the panic, by the action of Congress. Millions of acres of the public lands had been given to the companies, as an inducement to make railroads which were not needed. Upon this there supervened a disastrous crisis. The unduly rapid extension of railways caused an excessive demand for rails. The supply not being equal to the demand, and a heavy protective tariff being imposed on imported rails, the American ironmasters realised immense profits, and they rapidly increased the rolling capacity of their mills to an extent not warranted by the permanent prospects of trade. The consumption of rails in 1872 was 1,530,000 tons, of which 1,000,000 tons were made in America. In 1875 the capacity of the rail mills had been augmented to 1,940,000 tons. In the interval,

however, there had been a panic in railways, and the consumption of rails had been reduced to 810,000 tons. The capacity of the mills, therefore, had been increased to two and a half times the requirements, and a collapse ensued in the iron trade, from which there is no immediate prospect of recovery.

The experiences of the American ironmasters were repeated in the contemporary history of the British iron trade, though the fluctuations were less violent. The course of events is succinctly narrated in Mr. Lothian Bell's report. The increased demand for coal and iron commenced in 1871. The increase amounted to 6½ per cent. for coal and 22 per cent. for iron. In pig-iron there was an increased production of 664,000 tons in 1871, and of 110,000 tons in 1872; the totals being for 1870—coals, 117,000,000 tons, and pig-iron, 6,627,000 tons. The supply was still deficient, and the price of pig-iron rose to 122*s.* 6*d.* in August 1872. In 1873 the average price of 115*s.* was maintained throughout the year; yet the production, in spite of the inducement to make the utmost possible quantity, fell off to the extent of 175,000 tons. The difficulty of obtaining fuel was the cause of the diminution. So brisk was the demand that coke, which could be had for 12*s.* in 1870, rose to 42*s.* a ton in 1873. British consumers were obliged to compete as purchasers of fuel with foreign consumers. Meanwhile labour rose at the blast furnaces 50 per cent., and the cost of production was increased fully one-third. In 1874 the reaction set in rapidly, and Cleveland pig-iron receded from 115*s.* to 67*s.* 6*d.* In 1875 the price fell to 54*s.*,

the average for the year being 60*s.*; but by this time a considerable economy had been effected in the cost of the manufacture, and there was a small margin of profit. In 1876 there was a further reduction of wages, and if the trade was nevertheless unprofitable it was due to causes independent of the cost of labour. To an unbiassed mind this brief retrospective narrative will scarcely support the assumption that the violent dislocations, which have occurred, were attributable to the action of the workmen.

In every country, and in every line of business, the same tendency to over-trading has been manifested. There is a striking instance in the case of the steam communication between Liverpool and New York. New companies have been established, and the fleets of the older firms have been enlarged. The construction of numerous costly vessels on the banks of the Clyde, vessels which experience has shown to have been superfluous, had more effect in making labour scarce, and therefore dear, than all the machinations of the local trades unions.

Again, the manufacturing industry of the country, especially in coal and iron, has been injured by the abuse of the facilities, afforded by the Joint Stock Companies Acts, for the conversion of private into corporate enterprises. Mr. Gladstone has denounced in telling language the folly of investors, who deluded themselves with the belief that they could expect, as shareholders in a company, to reap all the profits, which had before been earned by trained and experienced manufacturers, who had spent their early lives in learn-

ing, and their maturer years in the administration of a complicated industry. In most cases the companies, on taking over the business from the vendors, expended large sums in additional plant and buildings. In order to find employment for their enlarged establishments contracts were taken with no regard to price. The administration was often entrusted to directors without technical or practical knowledge, who could not know whether the tenders they were submitting were based on sound calculations.

The same rashness has been displayed in the management of railways both in America and England. You will have observed the recent remarks of Mr. Sherman. It was to meet the loss consequent on an imprudent lowering of rates that the men employed were asked to submit to the reductions of wages, which led to the recent strike and the conflicts of lamentable violence which have taken place.

In England, as it was pointed out by Mr. Moon at the last half-yearly meeting, the accounts of the North-Western Company show a lower rate of profit per train-mile than in any year since 1861. What is the cause? Is the working man responsible? No. The cost of coal has been reduced by 1*s.* 9*d.* a ton. In the locomotive establishment there has been a saving of 50,000*l.*, and it is only through the reduced prices of labour and materials that the effects of over-competition, for which the capitalists were responsible, have been counteracted, and the former rates of dividend maintained.

This discussion of the labour problem must be

brought to a close with a few general remarks on trades unions. It has been recently said by Sir Edmund Becket, who gives expression to views very widely entertained, (1) that trades unions are a combination to do less work for the given wages; (2) that they teach the fatal doctrine that it is the business of working men to do no more than the least they can be paid for.

These grave charges may be true in a measure, but they are not the whole truth. With regard to the second charge, if it be true that bad workmanship is advocated by trades unions, it must at least be admitted that the national reputation is still high for the production of many important articles of a quality far superior to that obtained abroad. In textile industry the quality of our woollens, prices being taken into consideration, is unrivalled. In shipbuilding, machinery, and hardware we have an admitted superiority. We are practically monopolists of the unsubsidised traffic through the Suez Canal.

The existence of trades unions must be accepted as a necessary consequence of the new phases into which productive industry has entered; and the only practical question is, how to direct this important and extensive organisation into a useful channel. The working classes must always be more or less in a state of uncertainty as to the profits, which their employers may from time to time be realising. This must, however, be known, in order to decide whether they have a right to demand an advance of wages, or, what is the same thing, a reduction in the hours of labour. It is evident that the problem cannot be solved without an intimate

knowledge of the state and prospects of trade. Highly qualified commercial advisers are needed to guide the deliberations of trades unions on these matters. It is not enough to understand the conditions of the labour market in this country only. An international knowledge of the situation is essential. The organisation of the trades unions may be usefully employed for the purpose of obtaining reliable information from independent sources, both at home and abroad. As a practical suggestion, I venture to add, do not grudge an ample salary to a competent adviser.

The useful action of the trades unions need not be confined to the single question of wages. They may be employed to organise mutual efforts for improving the social condition of the working class. By their agency building societies may be established, co-operative distribution extended, and, what is far more difficult, co-operative production may be organised. You may help to provide rational amusements for the masses, you may facilitate technical education. You have shown in the present Congress that you appreciate your responsibilities in the watchful observation of legislative measures affecting the welfare of the people. You may act as peace-makers in the negotiation of terms of agreement between masters and men; you may use your influence in securing the observance of the conditions of a treaty, or acquiescence in the decrees of courts of arbitration.

As a Member of Parliament I may claim that the course of recent legislation, in so far as it affects working men, has been marked by a generous spirit. I should like to see imprisonment for debts to the amount

of less than 50*l.* abolished, as recommended by Mr. Lowe. I approve of the extension to seamen of the Employers and Workmen's Act. When the Bill for regulating the liability of employers for injuries to their servants is again brought forward, I am sure that Parliament will be considerate towards the workman. I am glad to learn that the Factories and Workshops Bill, which will be a prominent feature in the next Session, commands your hearty approval.

Let me conclude by expressing once more my gratitude for your kind invitation to be present at this Congress. To possess your confidence is an honour of which I am very sensible. It is one of the most regrettable incidents of the organisation of industry on a large scale that the personal relations between employers and their workmen have become less intimate than before. In my own case the discontinuance of my father's business has deprived me of opportunities, which I should have greatly prized, of associating with the working class. Many prejudices may be removed by an honest interchange of ideas, face to face, in a spirit of conciliation, and with a mutual and sincere desire to reach the truth and to maintain justice.

XI.

LABOUR AT HOME AND ABROAD.

A Lecture at the Central Hall, Leicester, October, 1877.

Having discussed Trades Unionism on two previous occasions during the present Congress, I shall confine myself this evening to other subjects, which may probably be interesting to an audience composed of the representatives of the great trades of the country. I need not say that I come here imbued with no prejudices against the English workman. I cannot but remember that when my father went over to France, as the pioneer of the business of the railway contractor in that country, he owed his success, in a great measure, to the superior qualities of a body of five thousand English workmen who followed him to the Continent. It may not be inappropriate to mention that the works of the railway connecting Paris and Rouen were let to the contractors in many separate contracts. Every bridge, tunnel, culvert, cutting, embankment, and station formed the subject of a distinct competition, the English estimates being the lowest in every instance. Though much of the work was new to them, the French had had considerable experience in some important branches of construction, and especially in

the building of timber bridges across the Seine. But there were other important elements of economical production which were altogether new in their experience; I mean the pluck, and energy, and skill of the British workmen. When those five thousand men, of whom I have spoken, first commenced to excavate cuttings and to pile up embankments, the French held up their hands in amazement at Herculean labours which they were incapable of imitating. The French labourers were physically incapable of vieing with the Englishmen. Their food was too meagre.

The industrial classes in England still retain many advantages, in regard to their standard of living, over the operatives of continental Europe. The physical condition of a large portion of the French population has not materially changed during the last twenty-five years. It is stated in Lord Brabazon's report that there are nine million families in France, of whom one million are in easy circumstances. The inhabitants of towns in France constitute about two-fifths, in England four-fifths of the entire population. The food of the French workman is inferior to that to which the Englishman is accustomed. In Rouen and many other manufacturing towns the dwellings of the labouring classes are wretched. The condition of the female weavers of France is thus described by Monsieur Jules Simon: "They are miserably lodged, clothed, and fed; and with all this they are obliged to work twelve hours a day."

In Belgium, again, where wages are extremely low, the working classes are as a consequence wanting in

strength and vigour. The employer would secure a more advantageous return for the money expended on labour if the workmen were more liberally paid. Mr. Grattan, the British Consul at Antwerp, gives a melancholy description of the condition of the working classes of Belgium. 'The standard of wages,' he says, 'taking all things into consideration, is undoubtedly insufficient to satisfy the legitimate wants of the working population.' The average wages of mill operatives do not exceed 1*s.* 8*d.* a day. 'The working days will hardly exceed 250 in the year; making a maximum earning of 20*l.* in a year, or about 8*s.* a week. Adding, in the case of the married operative, with a wife and three children, 10*d.* a day, earned by some member of the family, a weekly amount of 14*s.* will possibly be realised. The expenses of the family, calculated at the lowest possible rate, in ordinary seasons, fully absorb the earnings. In dear seasons the expenditure will exceed the earnings by at least 4*s.* a week. Beer, meat, and sugar are not included in the dietary. Diminish the family by one child, or add one-third to the wages of the operative, and it still remains next to impossible to make both ends meet. There are probably from ten to twenty thousand working men's households in Belgium in this sad position.' This description sufficiently proves that the wages of many trades in Belgium have been reduced to the minimum required for the meagre subsistence of the people. On the other hand, it is certain that the industry of Belgium has not escaped the depression experienced elsewhere. My conclusion is, that to minimise wages is by no means the most

effectual method of securing economy of production. It is a cheaper and a happier rule to give a fair day's wages for a fair day's work. I forbear to touch upon the social aspect of the subject. The prosperity of trade must be a thing little to be desired if it could only be attained at the price of misery and destitution.

The last report by Captain Tyler on the railways of the British Empire throws some light on the relations between wages and the cost of production in this country. While there have been considerable advances in the wages of all classes of workmen employed in the construction of railways, the average cost per mile of railway open has remained for many years approximately the same. It was 34,099*l.* in 1858, and 34,100*l.* in 1870. The average had risen to 38,000*l.* in 1875; but, as Captain Tyler remarks, the more recent railways have, with the exception of the Metropolitan and some others, been constructed at a much lower rate of cost per mile than the figure of 34,000*l.*, which was given as the average from 1858 to 1870. The inference is, that the pressure of the higher price of labour has stimulated in the utmost degree the contriving and organising faculties of employers. More machinery has been used, an ever-widening experience has suggested more effective and economical methods of work, and profits have been reduced to a minimum.

We are passing through an era of commercial depression. It is said that the trade of this country has been depressed, owing to the rise in the price of labour. It is however, to be observed that the same reaction has occurred in countries where the

lowest rates of wages prevail. In the iron trade (as it is shown in the commercial history of 1876 published by the *Economist*) the state of affairs in Germany and Belgium—countries of low wages—is most unsatisfactory. Even in France the railway iron trade is much depressed, Creuzot being described as almost deserted. In the United Kingdom, though the depression has been extreme, there was an increase of production in 1876 in the Cleveland district and in Scotland; and the indications for the future are decidedly more hopeful.

The high price of labour has not been the sole cause of commercial depression. In 1876, according to the circular of Messrs. Fallows, operatives worked steadily throughout the year. Colliers' wages had fallen 12½ per cent.; but the workmen must not forget that the market value of coal had fallen at least 20 per cent.

The reduction in prices in the coal and iron trades may be appreciated from the following figures:—

	1872–3.	1876.
Common engine-coal at pit	7*s.* 6*d.*	2*s.* 6*d.*
Ordinary pig-iron at works	6*l.* to 7*l.*	2*l.* 5*s.* to 3*l.*
Staffordshire bars	16*l.*	8*l.*
Best Bessemer rails	16*l.* 10*s.*	6*l.* 15*s.*

The profits derived from the inflated prices just quoted gave sudden and colossal fortunes to the employers and unexampled wages to the workmen; but the cost of production speedily exhausted the spending power of the consumers, and we see the inevitable result in the number of furnaces standing idle, and in the present reduction of wages. It may not be super-

fluous to point out that a very considerable proportion of the profits of the employers in the iron and coal trades was applied to the sinking of new pits and the extension of works, which have ever since remained but partly employed, the capital invested having thus been wholly unproductive. Nor must it be forgotten that, by the Mines Regulations Act and the Workshops Act, rules have been established which, while they are doubtless beneficial, necessarily entail expense. It is said, indeed, that the first-named Act has resulted in an increase in the cost of getting coal to the extent of 1*s.* or 1*s.* 6*d.* per ton. As an able writer in the *Pall Mall Gazette* has truly remarked, the cost of these improvements must be borne by the consumer; and the restricted demand of the last three years has shown that, during the period of depression, the consumer has been unable to satisfy the calls that have been made upon him.

British trade has suffered at least as much from reckless competition as from exorbitant wages. All the foreign markets have been overstocked with British goods. In order to encourage sales in a glutted market prices are reduced. To cover the reduction in prices manufacturers exercise their ingenuity to produce a showy article of inferior quality. The reputation of British goods in China has been almost ruined by the use of size to give a fictitious appearance to cotton goods. Sir Brooke Robertson, the British Consul at Canton, in a recent report, has pointed out in the most forcible language the necessity for restoring the good fame of British industry in the East by an abandonment of these practices.

I have pointed out how the returns upon capital have been diminished at least as much by rash speculation as by the aggression of trades unions. The contractors for loans to foreign states not entitled to financial credit have worked the London Stock Exchange until the supply has at length been exhausted. The misplaced confidence of the public has been destroyed by the revelations of the Committee appointed to investigate the subject. The losses which were brought to light in the course of their inquiry go far to explain why it is that the expenditure in many households has been of necessity curtailed.

Now that the savings of the country are fortunately no longer invested in the shares of bubble companies and loans to foreign states a difficulty has been experienced in finding suitable channels of investment. A field no doubt there is for the reproductive employment of the savings of the Old World in the development of the resources of the New. Many a brave and laborious settler in the Far West of North America, or in the wilds of Australia, could convert to profitable use a well-timed loan of 100*l.* from the unemployed deposits in the custody of the London bankers. But how are you to bring together the lender and the borrower?

There must be, as it has been said, more prudence in the application of capital; and the exaggerated profits of 1871 cannot be revived. The trades unions, on the other hand, must acknowledge that this is not all. It has been proposed by the trades unions that the depreciation of prices should be arrested by a limi-

tation of supply, and that the mill operatives should work short time. Such a suggestion must be received with the greatest caution, lest, by making production more costly, you raise the price of British goods in the neutral markets to such a point that you are undersold by the foreign manufacturer. Again, if, by restricting its use, you prevent the money invested in costly machinery from being reproductive, the result must be that capital will be diverted from manufacturing to other branches of business, where a more satisfactory return can be obtained. Factories, steamships, railways, are created by the savings of the public, who are perfectly unfettered in their choice of investments. There are cases in which it is the wisest course, in the interest alike of capital and labour, to compensate for low profits by selling a greater quantity of the commodity. In other cases of overtrading, the appropriate remedy is a temporary limitation of production. There are no abstract rules for all the varied contingencies which may arise in the industrial world. Each case must be dealt with according to circumstances. It is equally the duty of the workman and of his employer to watch closely and incessantly the course of events, with a view to select a fitting opportunity for the advancement of prices or the improvement of wages. Every alteration, whether of prices or wages, is a question of expediency and opportunity.

In all classes an advance of wages must be made subject to two conditions: (1) The cost of English labour must not be permitted to exceed the cost of foreign labour. (2) The scale of prices cannot be

raised beyond the capacity of the consumer to bear them. On the other hand, if the working men offered no resistance to the downward pressure, the reduction would continue until wages had been reduced to the minimum required to cover the cost of subsistence. In England, if the workman were to make such a sacrifice, the employers would reap no substantial or lasting benefit. So keen is the competition in every branch of trade, that the full benefit of the reduced price of labour would be given to the consumer. If labour were cheaper in England than it is, the workman would share with the whole body of consumers the advantages of a reduction in the cost of living; but how far that reduction would compensate for the reduction of wages it is not possible to say.

Much of the objection, which exists in the public mind towards trades unions, rests, as it must be confessed, on the general reluctance to see any effort made to raise the price of labour; but if it be inexpedient to seek for an advance of wages, all those requirements or prejudices, which make the cost of living of the working classes dearer in this country than on the Continent, may with equal justice be condemned. The British workman has a prejudice against brown bread and insists on eating white bread. If he were to be content with brown bread he would live more cheaply. But what is the effect of this prejudice? It is that the British workman will prefer to labour more and live on white bread, rather than labour less and live on brown bread. It is needless to give further details in illustration. All political economists are agreed that a high

standard of living is a stimulant to industry, and that a low standard of living tends to indolence. A demand for higher wages is only the aspiration to a higher standard of living in another form; and, provided that it be recognised that for the higher wages an equivalent must be given in better work and more work, there can be no abstract objection to the demand. The concession of more wages, without the equivalent in work, is only possible, where there is a margin of profit available for division among the workmen. It is, as it has been shown above, the business of trades unions to gather materials for forming a judgment as to whether such a margin exists. Where it does not exist, and the workman knows that he must do more work or better work, in order to secure an advance of wages, the aspiration for a higher standard of living is distinctly beneficial both to capital and labour.

I pass from this digression on the abstract rules of political economy to the consideration of the practical results of high wages, as exhibited in the social condition of the industrial population of the United States. Speaking of the period of prosperity anterior to the recent collapse of trade in the United States, I am inclined to believe that the working man in America, like his fellow-labourer in England, spent nearly the whole of his earnings on the maintenance of his family and household. If, however, his savings were not appreciably greater, his standard of living was much higher than that of the corresponding classes in our own country. In New York the dwellings of the workmen were often crowded to excess, and the same remark

is applicable to some of the towns of New England; but, for the most part, the working people of the United States inhabited comfortable houses and enjoyed an abundance of good food and clothing. For their children they had the advantage of an admirable system of public elementary education. The circumstances of 81 workmen, including carpenters, masons, shoemakers, and mill hands, were examined by the Bureau of Statistics in the State of Massachusetts in 1874. The results are given as follows:—

EXPENDITURE.

Rent	$146.58
Fuel	51.19
Groceries	350.38
Meat and fish	108.28
Milk	25.47
Clothing, boots, and shoes	114.65
Dry goods	28.27
Religion and books	23.18
Sundries	38.76
Total	$886.76 @ 4*s.* 2*d.*—184*l.*

The earnings were as follows:—

The father	$619.18
The children	310.78
Total	$939.96 @ 4*s.* 2*d.*—195*l.*

Number of rooms occupied	5
Persons in family	6
Children at school	2

Five houses were reported as unpleasant in situation, eight were moderately, the rest well furnished, thirteen contained pianos, and three had organs. All the

families save three were 'well dressed.' Yet, with all these comforts, not to say luxuries, only sixteen had deposited money in savings banks.

The advantages enjoyed by the working classes in the United States are, in my opinion, seriously diminished by the protective policy of the country. The trade is confined to the home market; and the fluctuations must be more frequent and more violent than in a country which has commercial relations with the whole world. In the case of a country which has a large export trade, the demand for goods, if dull in one market, will probably be brisk in another. Under a free-trade policy employment will accordingly be more regular. No condition can be more trying to the working classes than the alternation of high wages and employment with periods of complete inactivity. We have had much experience of this evil in England. It is aggravated in America by the existence of the protective tariff, which makes manufactures so dear as to render exportation impossible.

The depression of trade in the United States has brought more suffering on the working classes in that country than the English operatives have endured, although I fully recognise the claims of our fellow countrymen to our sympathy. This is shown by the reports received from my old friend Mr. Thomas Connolly. In a letter republished in the *Economist* he says that in Pennsylvania, which has a population of 3½ millions, there are more people out of work than there are in all England. A few individual cases may be quoted. A steel-roller at Distin's saw factory, who

came out from Sheffield at 7 dollars a day, is now working two days a week, at $3\frac{1}{2}$ dollars a day. The men on the Delaware and Western Railroad had to submit to three reductions in 1876, which brought down the wages of good workmen to 4*s.* 10*d.* a day. The only emigrants, he says, who are now required in the United States are agricultural labourers, and men who can buy land and settle on it.

In England there are two great evils with which the working classes have to contend: (1) overcrowded dwellings, and (2) an overcrowded labour market.

The gifted author of *The New Republic* has described in feeling terms the unlovely conditions in which the dwellers in great cities are in too many cases compelled to exist. 'Consider,' he asks, 'how the human eye delights in form and colour, and the ear is tempered to harmonious sounds; and then think for a moment of a London street—think of the shapeless houses, the forest of ghastly chimney pots!'

I venture to hope that the Industrial Dwellings Act carried through Parliament by the Home Secretary, at the instance of my friend and colleague, Sir Ughtred J. Kay-Shuttleworth, will fulfil the expectations of its promoters; although the difficulty of accomplishing the work on an extensive scale is great.

I cannot bring these remarks to a conclusion without expressing my deep satisfaction that there are so many men and women, some young in years and great favourites in high society, with every temptation to live a life of pleasure, who devote night after night to the organisation of workmen's clubs, to the further-

ance of the co-operative movement, and who are earnest advocates of your cause, in classes of society which have no practical knowledge of your aims and objects or of your condition of life. I tread, I know, on delicate ground in suggesting to the audience, whom it is now my privilege to address, that in every state of life—at least, in every state in which man can earn an independent livelihood—there are special consolations, and that certainly the wealthy have no monopoly of happiness. It is, however, the universal conclusion of all philosophy and experience, of men of every age and in every station, that happiness is not confined to the narrow circle of those who possess all the material elements of human felicity.

> Order is Heaven's first law; and this confess'd,
> Some are and must be greater than the rest,
> More rich, more wise; but who infers from hence,
> That such are happier, shocks all common sense.
>
> . . . . . .
>
> Condition, circumstance, is not the thing,
> Bliss is the same in subject or in king;
> In who obtained defence, or who defends,
> In him who is, or him who finds a friend.

The vindication of the rights of property, and the scientific explanation of the causes of the accumulation of wealth in some fortunate individuals, are themes which I cannot now discuss. It is enough to say that to the wise man riches are a weighty responsibility, and to the weak man a sore temptation. While the follies of the one are contemptible, the anxieties of the other may sometimes deserve the sympathy

of the independent artisan. Far as they are apart, the various classes of society depend on one another. In their union consists our national strength and individual happiness. It was to promote that union that I came among you, and I go away with many grateful memories of my visit to Leicester.

XII.

ON THE COMPARATIVE EFFICIENCY OF ENGLISH AND FOREIGN LABOUR.

LECTURE DELIVERED AT HAWKSTONE HALL, WESTMINSTER BRIDGE ROAD, JANUARY 21, 1878.

AT the present time trade is dull in almost every department, and merchants, manufacturers and the public, disheartened by a long period of depression, are oppressed with a vague dread of foreign competition. It is asserted that the English workman has become relatively more idle, and less skilled, and that the cost of production has become so great that our goods are being displaced by the exportations of rival manufacturers abroad. Admitting that labour in this country has certainly become dearer and probably less efficient than before, and that it is the duty of the working classes and their advisers to grapple with the difficulties of the situation by practising thrift, and by working better, I think it right to point out that the same complaints which are rife in our own country at the present time, are heard in every great seat of manufacturing industry abroad.

While, however, the depression in the trade of other countries has been even more marked than that experienced in this country, the fact remains that there has been a decline in the markets for the chief com-

modities of our export trade, which is described in a recent number of the *Economist* as steady, continuous, and serious. The price of pig iron has fallen from 80*s.* a ton in 1874 to 51*s.* 6*d.* at the close of December, 1877. The price of coal is 18*s.* 6*d.* as compared with 30*s.* a ton at the end of 1874; of copper, 66*l.* as against 83*l.* 10*s.* a ton, and tin, 66*l.* as compared with 94*l.* per ton three years ago. There has been a corresponding fall in the prices of textile fabrics. Such a state of things is calculated to awaken gloomy forebodings for the future prosperity of our country, in which so large a proportion of the population is dependent on manufacturing industry. But we are not alone in our misfortunes. The iron trade is in a state of unprecedented depression in France and Belgium. In Germany it is described by Dr. Leo de Leeuw, the eminent statistician, as one of the most prostrate industries of the Empire.

It has been represented that the falling off in our iron trade has been caused by the inflation of prices, and that that inflation is due chiefly to the rise of wages. If we have suffered from this cause in England, the same difficulty has presented itself on the Continent. The *Zeitschrift für Schweitzerische Statistik* has lately published some very valuable papers by Dr. de Leeuw, the following extracts from which have recently appeared in the *Times*: 'In Germany between 1867 and 1872, the wages of file-smiths were advanced from 60 to 100 per cent.; file cutters got advances in the same period equal to 90 per cent., in some instances even more; and the pay of workers in other

trades was augmented by from 25 to 50 per cent. Yet, according to the unvarying testimony of the employers, the actual wages earned in 1872 and subsequent years were scarcely in excess of the wages earned before 1867. The workmen took the difference in idleness and dissipation; in most establishments it became the rule to close from Saturday night till Tuesday morning, and it was only on Wednesdays that work was fairly resumed.'

Let us examine the condition of the textile industries from a similar point of view. The falling off in the exportations has led to numerous and doubtless inevitable reductions in the wages of the operatives. These reductions have been resisted, and the obstinate resistance of the working people has been severely condemned. It has been said that the influence of the Trades Unions threatens us with a permanent depression of our trade, and that our spinners and weavers no longer execute their task as well or as cheaply as the operatives of other countries. The Board of Trade returns, however, do not show any diminution in the exports of cotton, linen, or woollen goods during the past year. There is stagnation in trade, but no falling away in the aggregate value of our exports. Are the industries of other countries in an equally strong position? I think not. In France, the exports in 1876 showed a decrease in value of 12,000,000*l.*, when compared with those of 1875; and this falling off constitutes, as it is scarcely necessary to point out, a larger percentage on the export trade of France than on the export trade from England. The total exports of British produce only, in 1875, were valued at

223,465,000*l.* The total exports from France were 154,905,000*l.* in 1875, and 142,795,000*l.* in 1876.

Some most interesting facts, as bearing on the comparative efficiency of English and foreign labour in the textile industries, are given in the last report of Mr. Redgrave, the Inspector of Factories. The number of spindles for each person employed in the cotton factories was 78 in the United Kingdom, and only 60 in France. The proportion of adult males employed in the cotton factories of the United Kingdom is 40, and in France 50 per cent. of the total number of operatives. The report of Mr. Baker, the colleague of Mr. Redgrave, contains extracts from the 'Annual Review of the Cotton Trade' for the season 1875-76, published by Messrs. Ellison and Company, of Liverpool, which ought to be reassuring to those who take a too melancholy view of our commercial prospects. 'Oddly enough,' observes Mr. Baker, 'while our manufacturers have complained so heavily of foreign competition, and have resorted to various means to produce goods at cheaper rates, the manufacturers abroad have been complaining of English competition in the strongest terms. Complaints of the competition of cheap Manchester goods, offered at prices never known before, are heard in Sweden and Norway, Prussia, Saxony, Baden, Würtemberg, Alsace, Austria, Switzerland, Belgium, France, and Italy. In Baden it is reported that trade is expected to improve 'when politics are more settled, for then Manchester may find an outlet for her goods elsewhere.' In Switzerland, where the thrift and good conduct of the operatives have been so highly commended, the com-

petition of English yarns and goods is spoken of as 'ruinous not only in the home market but in foreign countries to which Swiss goods are exported.' In Belgium, that land of low wages and a low standard of living among the operatives, sales are said to have been less easily made in consequence 'of the competition of English goods offered at low prices.' Here, too, manufacturers look forward to the settlement of the Eastern Question, and the diversion of Manchester goods, which it is expected will follow that event. In France, a really satisfactory trade is considered impossible until the pressure of English competition is relaxed.

The *Times* correspondent, from whom I have already quoted, gives the following extract, which abundantly confirms Mr. Baker's encouraging view of the capabilities of British industry:—'One of Dr. Leo de Leeuw's most striking comparisons is that between an English and a German cotton factory, the former situated in Lancashire, the latter in Saxony. The English concern is one of 63,900 spindles, the Saxon establishment contains 22,000. In the larger factory 202 workpeople are employed, at a total wage outlay per week of 176*l.* The 130 *employés* of the smaller mill earn 80*l.* a week. Thus, while the average earnings of the Saxony operatives were not more than 11*s.* 10*d.* per week, their English fellows, including of course women and children, earned 16*s.* 10*d.* each, a difference of more than forty per cent.; and the week of the English factory hand, be it remembered, is many hours shorter than that of the German *Arbeiter*. But the English establishment is nearly three times the size of the Saxon, and while the

former is worked with 3·1 *employés* to every thousand spindles, the latter requires 5·99 to every thousand spindles, nearly twice as many. To put the matter in another shape, if both factories were of the same size, each containing 64,000 spindles, the annual disbursements of the German concern in wages would amount to 12,000*l.* against 8,800*l.* for the English establishment —a saving in favour of the latter at the rate of 3,200*l.* a year. If this comparison were carried further, it would doubtless show, in other respects, to the disadvantage of the Saxon cotton-spinning; for if it costs more to build houses in Germany than in England, it also costs more to build mills, and increased rents must tell as heavily on the manufacturer as the householder. With these facts before us, we need not be surprised to learn the further fact that cotton-spinning in Saxony is fast becoming an extinct trade. It must not be supposed that wages in Germany and Switzerland are still as high, labour still as inefficient, as they were for some time after the war of 1870-71. The bitter sufferings of the last two or three years have taught some useful lessons. Capitalists are less reckless, workmen more moderate, than they once were; but the cost of living is as yet not greatly diminished, and house rent yields with exceeding slowness to the pressure of the times. Millowners and merchants continue to curtail their operations.'

The apprehension with which British competition is regarded is clearly indicated in the protective policy which every manufacturing country still maintains. From the return obtained last session by Mr. Fawcett, I

quote a few figures to shew the obstacles which British industry has to surmount. The tariff in the subjoined table is calculated in percentages *ad valorem.*

Arti	Countries			
	Russia	Germany	Belgium	United States
	Per cent.	Per cent.	Per cent.	Per cent.
Cotton Yarns	38	7	7 to 19	75
Linen „	35	1¼	Free	30 to 40
Woollen „	13	½	2 to 4	85
Iron—				
Bar	50	Free	5	67 to 100
Pig	28	Free	5	46 to 83

When we examine the relative proportions in which English and foreign productions are exchanged in these countries, we shall see no reason to justify the hostile tariff which is maintained against our importations. It is in the neutral markets offered by the non-manufacturing countries, where our producers, trained in the bracing air of keen competition, compete so successfully with the artificially reared industries of other countries, that the advantages of our free-trade system are most conclusively displayed.

The barrier of hostile tariffs must be taken as a clear indication that the capabilities of English industry are appreciated much more highly by those with whom we compete abroad, than by the pessimist critics at home. Small importations of goods of a special type or quality lead to a cry of alarm, as if our home market had been monopolised by the dreaded foreigner. The people who think these things seem to have no conception of the immense superiority of English industry, in point of

extent, over that of every other competing country. Consider, for a moment, the relative position of our textile industry. In England the number of spindles at the end of 1874 was 39,000,000. The corresponding figures were—for Germany, 5,000,000; Austria, 1,500,000; Switzerland, 2,900,000; Belgium, 800,000; and France, 5,000,000.

In an article on foreign competition which has lately appeared in the *Times*, it is clearly shown how difficult it would be for foreign competitors to displace us to any material extent. A capital of several hundred millions must be sunk in producing annually the 140,000,000*l.* of goods exported from this country. But even 100,000,000*l.* would not be easily found in the whole civilised world, outside of England, for the erection of new works to compete with our manufacturers. It would take years to accumulate the amount of capital necessary for such a purpose.

Again, the displacement of labour would not be less difficult. Highly trained operatives are not made in a day, and there is no redundant supply of mechanical labour at the present moment in other countries. Again, the complexity, variety, and minute subdivision which are necessary in manufacturing enterprise on a large scale, give to England a conspicuous advantage. Our country is a vast workshop, fitted with the most complete appliances of every sort.

The recent strike among the shipwrights in the Clyde is one of the most regrettable incidents in the labour movement of the past year. Shipbuilding has been a most progressive and distinctively national fea-

ture in the modern industry of our country, and on the banks of the Clyde it has been carried to the highest degree of perfection. The finest ships for war and commerce, which are to be found in the fleets of our maritime rivals, have been built on the Clyde. During the past year there has been a serious falling off in the amount of tonnage built. The fluctuations in the shipbuilding on the Clyde have been recently detailed in *Engineering*. 'The amount of shipping launched during 1877 was the lowest that has been recorded during the last ten years, in all 228 vessels, of an aggregate of about 168,000 tons; whereas in the year 1868 the total tonnage launched amounted to about 170,000 tons. From that year onwards there was a somewhat steady rise each year, until we come to 1874, when the largest total ever yet reached was launched, namely 266,800 tons. The falling off, as compared with the launches in 1876, is nearly 37,000 tons, and fully 60,000 tons as compared with the year 1875, while it is nearly 100,000 tons as compared with the turnout in 1874, a sort of *annus mirabilis* in the Clyde shipbuilding industry.'

Strange to relate, it was at a time of such unprecedented depression that the shipwrights made a demand for an advance of wages. Their request was refused, and they went out on strike. All the other trades connected with shipbuilding followed their example. No less than 10,500 men were, in consequence, thrown out of work. The loss in wages amounted to 150,000*l.*; while the loss to the employers has been estimated at 300,000*l.* Eventually the dispute was referred to

arbitration. In this case the workmen were clearly in error. The yards were full of orders, but the contracts had been taken at low prices. Shipowners had been tempted to lay down new ships only by the low prices at which they could be built. Profits had been reduced to a minimum. In numerous instances a loss would have been sustained, even if wages had remained at the rates current when the contracts were taken. It is not true, however, to say that the misconduct of the shipwrights is the only cause of the depression in shipbuilding. Neither has the business of shipbuilding been transferred from our own to other countries. The construction of iron steamers, which has languished in this country, has been almost entirely suspended abroad. In point of fact, the amount of shipbuilding has for some years been in excess of the demand in the carrying trade. Several large companies have pursued a reckless course in adding too readily to their tonnage.. . Hence, even if the workmen had displayed a more reasonable and tractable spirit, the shipbuilding trade must have been comparatively unprofitable and inactive.

The suffering due to the general depression of the shipbuilding trade was, nevertheless, needlessly aggravated by the strike. The remonstrances addressed by the writer of the article in the *Economist* of December 29, to the operatives in the textile industries, may be addressed with equal justice to those employed in shipbuilding and all other branches of industry under the like conditions.

The operatives know that there is a stagnation of

trade. They know that the immediate consequence of a diminished demand is a reduction of prices, and that when prices fall a fall in wages must ultimately follow. To prevent the fall in prices they advocate a diminution of production. They say, 'Let us work short time and keep wages at the old rate.' Assuming that an excess of tonnage had been built, the shipwrights on the Clyde might have argued that it was for the interest of all concerned to suspend for a time the construction of new ships. But this remedy, as the *Economist* points out, is costly in the extreme. In the cotton trade, where the average earnings of a family of operatives are 60*s*. per week, a reduction of one-third of the time involves a loss of at least 18*s*. a week. Yet this solution is preferred to a reduction of 10 per cent., or 6*s*. per week, as proposed by the masters. It is further to be observed that as it has been by cheapness of production that England has attained such a decided pre-eminence in the export trade, so it is by that further economy of production, which might be effected by a temporary reduction of wages, that our power of competition would be most securely maintained, and new markets opened out.

Let us apply these general principles to the particular industry of shipbuilding. We are engaged in a close competition in the carrying trade by sea, for all the less valuable descriptions of goods, with the mercantile marine of Northern Europe. By availing themselves of an interval of depression to build sailing ships and steamers at an exceptionally low rate, our shipowners might have created a considerable tonnage

with a smaller capital than before. With cheaper ships they could afford to accept lower rates of freight, and could thus compete with the foreigners in branches of the carrying trade, from which they have hitherto been excluded. First-class sailing ships can now be built at from 12*l.* 10*s.* to 13*l.* a ton, with a full outfit; while cargo steamers, with compound engines, can be built at from 15*l.* to 17*l.* per gross register ton. The present time, therefore, presents an opportunity to capitalists who can afford to await the turn of the tide; and orders will be given because prices are low. Is it not more advantageous for the workmen to accept employment at reduced rates than to remain idle, or partially idle, during an interval which may, perhaps, be of considerable duration? If the men insist on the wages they were earning in the highly prosperous period of inflation through which we have lately passed, their employers can make no reduction on the former prices for ships; and at those prices it is quite certain that at the present time only a few ships, for certain special trades, would be constructed.

While I have endeavoured to remove needless apprehensions for our industrial future, I am far from saying that no errors have been committed by masters and men. There are many delusions which the sharp lessons of adversity may tend to dissipate. 'The present bad times,' as the *Economist* has truly said, 'are their own most permanent and certain cure.'

In this point of view, perhaps nothing can be more instructive than an examination of the state of the

labour market in the United States. It has been ably described by Mr. Plunkett in his recent report on the railway riots in America. In that country there has been an universal indulgence in the extravagance of living which has been so justly and so severely criticised in England. Every household, from the top to the bottom of the social ladder, has been more or less recklessly managed. While the prices of almost all kinds of food have been no higher than in England, it was considered in America that 24*s.* a week were the lowest possible wages for which a labourer could support himself and his family. It was an inevitable result of this extreme dearness of labour that all articles in the production of which labour was an important factor, were extremely costly. Take, for example, the two important items of fuel and house rent. A comparative statement from Dr. Young's 'Labour in Europe and America,' gives the following figures:—

	Germany		United Kingdom		New England		Middle States		Western States	
	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.
Coal, ton . . .	6	70	3	48	8	95	5	43	6	30
Four-roomed tenements .	5	90	4	14	5	85	10	22	9	12
Six „ „	9	90	5	97	7	45	14	52	16	90

Mr. Minot, the author of a paper on Local Taxation, read before the recent American Social Science Convention at Saratoga, attributes the increase of personal extravagance to the Legal Tender Act. It was decreed that a piece of paper, on which the Government has inscribed a promise to pay, should be accepted as a dollar. The whole country acquiesced

in the fiction. Everybody who had a gold or silver dollar soon found that he had two dollars for the one in paper; and everybody computed his property as having at least double the value, and began to live accordingly.

Since 1873, however, a change has come upon the spirit of this dream; and, with a quickness of apprehension which could hardly have been displayed in an old country, the American people are adapting themselves to the altered situation. 'Incomes, wages, and expenses,' to use the language of Mr. Wells, 'are being scaled down.' Profits are reduced. The rate of interest on capital has fallen. The future prosperity of industry, we are told, is to depend more upon economy than upon large profits. The American labourer has to make up his mind that he will not be so much better off than the European labourer. It will be harder for him to cease to be a labourer, and to become an employer of labour.

Details as to the fall of wages are given by Mr. Plunkett, from several sources. At Cincinnati, in Ohio, in 1872, the rate paid to the common labourer was one dollar 50 cents. or six shillings per day. The present rate is one dollar a day. This gives a reduc- of $33\frac{1}{3}$ per cent. The reduction in the wages of mechanics has been about equal to that in the wages for unskilled labour. Turning to the cost of living, the reduction has been fully proportionate to the difference in wages. Since 1872, coal has fallen 50 per cent., house furnishing goods have declined in value fully 40 per cent., furniture 35 per cent., glass-

ware 35 per cent., cutlery 25 per cent., and crockery 20 per cent. Table expenses having remained the same, the reduction in the cost of living in the last five years is not less than 30 per cent. Hence, with wages reduced only about 35 per cent., the working men who are fully employed are not severe sufferers.

The leaders of our Trades Unions, who too often commit themselves, in unprosperous times, to a stubborn resistance to a reduction of wages, may study these figures with much advantage. They will see that the maintenance of high rates of wages all round is not an unmixed benefit to the people at home, while it must certainly affect, prejudicially, our power of competition abroad. A general advance of wages means a general rise of prices; and it is obvious that if that advance of prices be such that the increase in the cost of living up to a given standard absorbs the increase in wages, the rise of wages has conferred no practical benefit on the workmen. Conversely the fall in wages may be fully compensated, as in America, by a proportionate reduction in the cost of living.

Mr. Archibald, our Consul-General in New York, gives some tables which shew the fall that has taken place in wages in every State of the American Union:—

The percentage of reduction of railroad wages from 1873 to 1877 on seven different lines was as follows:—

	Percentage of Reduction							Average
Conductors	20	46	18¼	...	22	28	8	24
Brakemen .	19	38	23	14⅓	20	26	...	23
Firemen .	9½	25	12	...	41	31	9½	21
Switchmen	23	23½	33⅓	19	33⅓	26	12	23
Trackmen .	43	40	33⅓	33⅓	44	30	...	37

The percentage of reduction for other classes of labour is shewn in the following statements:—

Building Trades.

	Daily Wages		Per cent. of Decrease
	1873	1877	
	D. C.	D. C.	
Masons	4 00	2 50	37½
Masons' labourers	2 50	1 50	40
Plasterers . . .	5 00	2 50	50
Carpenters . . .	3 50	2 50	28½
Common labourers	1D. 75C. to 2D. 00C.	1 25	28½ to 37½

Contractors' Men.

	1873		1877		Per cent. of Decrease	
	D. C.	D. C.	D. C.	D. C.		
Stone Masons on railroad work. . . .	3 00 to	3 50	1 50 to	2 00	50 &	43
Stone Cutters . . .	4 50	5 00	...	2 50	44	50
Carpenters on railroad work	2 50	3 00	...	1 25	50	59
Blacksmiths (exceptionally skilful) . .	...	4 50	...	2 50	...	44
Blacksmiths, ordinary	...	3 00	...	1 50	...	50
Blacksmiths' helpers .	...	2 00	...	1 00	...	50½
Tracklayers	...	2 00	1 12	1 25	44	37
Engineers, steam shovel (per month) . . .	118 00	125 00	...	60 00	48	52
Firemen, steam shovel (per day)	...	2 50	...	1 50	...	40

Summary.

Railroad wages—

The average percentage of reduction varied from 21 per cent. for firemen, to 37 per cent. for trackmen.

Building trades wages—

The average percentage of decrease varied from 28½ per cent. to 50 per cent.

For other classes of labour, as specified—

The average reduction was nearly twice as great as the average railroad reductions.

In the oil refineries and yards about New York, where a great many men of different trades are employed, including coopers, ship carpenters, house carpenters, and machinists, the reductions of wages since 1873 have been about 25 per cent.

These figures should convey a most instructive lesson to our working people. I have on many occasions shown that the cost of production cannot be determined by the nominal rate of daily wages, and I have never been alarmed for the future of the industry of the United Kingdom, simply because wages on the Continent of Europe were so much lower than in this country. I have been much more impressed with the capabilities of the manufacturers of the United States. In America labour has, until a recent period, commanded the highest rates of wages. The scarcity and the cost of labour have stimulated to the utmost the ingenuity of our intelligent and enterprising kinsmen across the Atlantic, who have all the qualities of the Anglo-Saxon race and a boundless field for their development. Labour-saving machinery, and mechanical skill generally, have thus been brought to great perfection. With high wages, and all the obstacles to trade which an extreme protectionist system presented, the cost of many articles has been brought down to a level, which has enabled American manufacturers to compete successfully with our own producers. I will give a striking case as an illustration. It might have been supposed that the rifles required for the Turkish armies

would have been made by the comparatively cheap labour of Liége or Birmingham. That, however, has not been the case. A contract for rifles, amounting to 17,000,000 dollars, the largest single contract ever taken in America from a foreign nation, was given to the Providence Tool Company by the Turkish Government. The Tool Company were three years in preparing to begin the work upon the contract, and now employ 2,500 men, who turn out 200,000 Martini-Henry rifles per year, or 600 finished rifles in a day. 'One of the side businesses of magnitude'—to quote from the *Polytechnic Review*—'which have grown principally out of this contract is that of the Excelsior Box Company of Providence, which is busy making 10,000 boxes per year for the Tool Company, in which to ship their guns to Turkey. The machinery for the manufacture of these boxes was perfected by an invention for the purpose. The Company have still two years in which to complete the number of these boxes that they contracted to make, by which time, also, the Tool Company will have completed their immense contract with the Turkish Government.'

The mechanical industry of the United States has been developed with equal success in other branches. The locomotive manufacturers of Pennsylvania have supplied engines to all the railways of South America, and I believe to our own Australian Colonies also. It would seem at first sight incredible that our engine builders should have been beaten in a neutral market with no hostile tariff. Anyhow, it would have been expected that if we were beaten it would have been by

Belgians or the German makers, who command an ample supply of labour at comparatively low rates. The contrary, however, has happened; and it is a country where labour is paid at rates unknown in the Old World, which has supplanted us. We have been conquered by the mechanical skill of the employer in devising labour-saving machinery, and by the industry and energy of the workmen, who, if they have earned high wages, have worked longer and more industriously than many among our own mechanics have been disposed to do. I am not afraid of high wages, but I have a fear lest the foundation of our industrial prosperity should be undermined by restraints on the characteristic energy of our people. If our workmen allow themselves to be deluded with the notion that by working at half speed they will prevent over-production, British industry cannot contend successfully against the free and vigorous efforts of our kinsmen in America. The only result of such a suicidal course must be that the people, who impose no artificial restrictions on their powers, will take our place in every open market.

In conclusion, permit me to say that I offer in no narrow and selfish spirit these suggestions to the consideration of my fellow-countrymen, whose lot it is to labour and to earn their bread by the sweat of their brow. I contemplate, with more equanimity than some students, perhaps, of economical science, the increasing participation of other nations in trades, which once seemed destined to be the monopoly of the United Kingdom. Would it be a thing to be desired that our island should become the universal workshop of mankind? Would

it add to the felicity of its inhabitants that the population of this huge metropolis should be doubled in number? Would you wish to see all Lancashire and Yorkshire honeycombed with coal-pits, every hill crowned with a monster manufactory, and the black country of Wolverhampton enlarged to twice its present limits? Is it not better that we should share with other nations in the development of those industries which, however admirable they may be as illustrations of the skill and energy of man, inevitably involve the destruction of much that is fair and lovely in nature? A life without trees, and flowers, and blossoms, which no breeze from the hills or the sea ever refreshes, is a life imperfect, and wanting in the purest and the best pleasures which it is given to man to enjoy.

I heard a thousand blended notes
While in a grove I sat reclined,
In that sweet mood when pleasant thoughts
Bring sad thoughts to the mind.

To her fair works did nature link
The human soul that through me ran;
And much it grieved my heart to think
What man has made of man.

Let us, then, abandon the vain idea that it is an irreparable misfortune for our country to share with others in the development of the commerce of the world. Let us study the situation in a spirit of generosity to the foreigner and of justice to our own people. Montesquieu has well said: 'L'esprit de commerce produit dans les hommes un certain sentiment de justice exacte, opposé d'un côté au brigandage et de l'autre à

ces vertus morales qui font qu'on ne discute pas toujours ses intérêts avec rigidité, et qu'on peut les négliger pour ceux des autres. Le commerce rend les hommes plus sociables, ou, si l'on veut, moins farouches, plus industrieux, plus actifs; mais il les rend en même temps moins courageux, plus rigides sur le droit parfait, moins sensibles aux sentiments de générosité.'

It may be that the young men and women of the present and of coming generations may be required to go forth in augmented numbers to earn their livelihood in other lands. Such a contingency may be contemplated without regret, if our sons and daughters carry with them an affectionate memory of the mother country. In the Antipodes, or the New World, under the Union Jack, or it may be beneath the Stars and Stripes of the American Union, I see before me a glorious vision of the growth of the Anglo-Saxon race. I see new nations rising up, speaking our language, and educated in our literature, bound to us and to one another by the closest ties; and I see, in this wider distribution of our race, more individual happiness, and a surer basis for our greatness as a nation, than in the concentration of a redundant population within the narrow limits of their ancestral island home.

LECTURE XIII.

ON THE RISE OF WAGES IN THE BUILDING TRADES OF LONDON.

READ BEFORE THE ROYAL INSTITUTE OF BRITISH ARCHITECTS, FEBRUARY 4, 1878.

THE present Paper has been prepared in compliance with an invitation of long standing, which I esteem it a great honour to have received. The delay in the preparation of the following statement is due to the pressure of many engagements, and to my protracted absence on a voyage of circumnavigation. Even now I should have been quite unable to have performed my task, without the aid and co-operation of others. I have little spare time for such an investigation, and I have no technical knowledge. Under these circumstances I appealed to gentlemen whom I knew to be thoroughly conversant with the subject, and I gratefully acknowledge their readiness to assist me. Being anxious to collect the information required from impartial sources, I applied to Messrs. Hunt and Stephenson, the well-known surveyors. As representatives of the builders I communicated with my old friends, Messrs. Lucas Brothers; and lastly, with a view to obtain a fair statement on behalf of the workmen, I asked the co-operation of Mr. Howell. These

gentlemen, therefore, are in point of fact the authors of the following Paper. If it possesses any importance as a contribution to the sum of knowledge on that labour movement which constitutes one of the most urgent questions of our time, it is to the practical authorities whom I have quoted that its value must be attributed.

To the Council of this Institute belongs the credit of suggesting that a review of the alterations in the rates of wages in the building trades should be prepared. It is only by bringing into view the fluctuations in prices during a tolerably extended period that the relation between cause and effect can be satisfactorily traced, and principles laid down for the future guidance of masters and men. It was truly said by Lord Bolingbroke that 'history is philosophy teaching us by examples how to conduct ourselves in all the struggles of public and private life.'

I begin by giving a statement of the increase of wages and reduction of working hours in the building trades in London from 1837 to 1847. The current wages of building operatives in London from the year 1836 were 5*s*. per day of ten hours, or 30*s*. per week of sixty hours. This rate was generally adopted, but it was not universally paid in all branches of the building trades until 1847. In fact, it was only established as the standard rate by dint of protracted efforts, extending over a period of several years. Masons and bricklayers were the first to secure the advance. The carpenters, plasterers, and painters followed their example.

In the year 1847 a movement was set on foot for a reduction of one hour and a half on Saturdays, the men leaving work at four o'clock. This agitation seems to have originated from the idea of the Saturday half-holiday which had been promoted by Lord Shaftesbury and other eminent philanthropists. After a comparatively short struggle the hour and a half was conceded; and it soon became general for all branches of the building trades to leave work at four o'clock on Saturdays. Only one master persisted in refusing this boon, and he was ruined for his obstinacy.

In the year 1853 an effort was made to obtain a reduction of time to nine hours a day. The men were offered a rise of 6*d.* per day which was accepted, and the nine hours' agitation was abandoned. The rate of 5*s.* 6*d.* per day was not universally conceded in all branches of the building trades for some years, although the leading firms gave it to the majority of their workmen.

In 1857 an agitation was recommenced for the Saturday half-holiday. This was abandoned in 1858, and a limitation of the hours of work to nine hours a day was accepted instead. In 1859 the movement in favour of the half-holiday was again resumed, and the demands of the men being refused, a strike ensued, which was followed by a lock-out of the whole of the building operatives in London. Eventually, in 1861, the masters introduced the hour system, payment being made at the rate of 7*d.* per hour. A reduction in time was obtained of two hours on Saturdays, the men working through the dinner hour, but leaving work at

1 p.m. instead of 4 p.m. as formerly. In 1865 a rise of a halfpenny, making the wages 7½*d.* per hour, was granted without a strike. In 1866 another rise of a halfpenny per hour was granted, making the rate 8*d.* per hour.

After a strike and partial lock-out in 1872 the masters granted a further advance of a halfpenny, raising the rate of wages to 8½*d.* per hour. There was a simultaneous reduction in time of four hours per week; the men leaving work on the first five days of the week at five o'clock, and on Saturdays at twelve. The hour for commencing work was at the same time fixed at half-past six on Mondays. In 1873 another rise of a halfpenny per hour was granted without a strike, making 9*d.* per hour, and the working hours were fixed at 9½ per day, or 52½ hours per week.

In 1876 a memorial was sent to the master builders, asking for an advance of wages from 9*d.* to 10*d.* per hour. This demand being refused, on June 30, 1877, the masons struck, and the strike is still pending. It will be seen from the foregoing statement, which embraces a period of 30 years, that there has been a reduction since 1847 of seven hours and a half in time —that is to say from 60 hours per week to 52½ hours. The current wages in 1847 were at the rate of 5*s.* per day of 10 hours, or 30*s.* per week for 60 hours' work. In 1877 the current wages were 1*l.* 12*s.* 4½*d.* for 52½ hours' work, being an increase of wages amounting to 9*s.* 4½*d.* per week. This represents a rise of 31½ per cent. on the original scale of wages, at the rate of 30*s.* per week, and of 12½ per cent. in time value, or a total advance in 30 years of 44 per cent.

Mr. Howell further states that greater care is taken to ensure regularity of employment. The masons and carpenters have better sheds or workshops. Wherever it is possible, the bricklayers engaged in cutting arches, splays, or similar work, are under cover in wet weather. On the other hand it is said that large contracts are finished more rapidly. Hence the men have to look out for fresh jobs oftener than they had to do 30 years ago. The time also is kept more strictly. A workman must be at his work at six o'clock precisely. No five minutes' allowance is now given. The workmen are equally prompt in dropping their tools as the clock strikes five.

Messrs. Lucas have prepared a memorandum giving the various wages by the day or the hour both for labourers and mechanics. It will be seen upon examination that these figures, although stated in a different form, correspond exactly with those contained in Mr. Howell's Paper :—

Memorandum of the Cost of Materials and Labour, etc., in the Building Trades.

Date	Wages per day of ten hours	
	Mechanics	Labourers
	s. *d.*	*s.* *d.*
Sept. 1853	5 0	3 0
Sept. 4, 1853, to March 22, 1861 . .	5 6	3 4
March 23, 1861, to Sept. 27, 1865. Payment by the day was discontinued and the men were paid at the rate per hour of	Per	hour
	0 7	0 $4\frac{1}{4}$
Sept. 28, 1865, to May 4, 1866 . .	0 $7\frac{1}{2}$	0 $4\frac{1}{2}$
May 5, 1866, to July 5, 1872 . . .	0 8	0 $4\frac{3}{4}$
July 6, 1872, to Aug. 1, 1873 . . .	0 $8\frac{1}{2}$	0 $5\frac{1}{4}$
Aug. 2, 1873, to present time . . .	0 9	0 $5\frac{3}{4}$

The present working hours are—

Monday	9	hours.
Tuesday	9½	„
Wednesday	9½	„
Thursday	9½	„
Friday	9½	„
Saturday	5½	„
Total	52½	

as compared with 60 hours for the summer and 47 hours for the winter season, commencing 6 weeks before and ending 6 weeks after Christmas.

This shows an increase of 50 per cent. upon the wages of mechanics, and 64 per cent. upon those of labourers. In addition to this, there is a loss in time of 7½ hours per week. The men now only work 52½ instead of 60 hours—a reduction of 12½ per cent. in time; the mechanics receive 39*s.* 4½*d.* for the 52½ hours instead of 30*s.* for 60 hours; and the labourers also work 12½ per cent. less time and receive 25*s.* 2*d.* for 52½ hours as against 18*s.* for 60 hours. It is a remarkable circumstance that the most important advances have been obtained by the unskilled workmen. The lower the original rate of wage the greater has been the advance. This is clearly shown in the following table prepared by Mr. Stephenson:—

Memoranda with Reference to the Comparative Cost of Wages and Materials for Builders' Work in 1865 *and* 1875.

Wages	In 1865 per Hour	In 1875 per Hour	Increase
	d.	*d.*	
Excavators . . .	$4\frac{3}{4}$	$6\frac{1}{4}$	28 per cent.
Bricklayers . . .	$7\frac{1}{2}$	9	20 „
Masons	$7\frac{1}{2}$	9	20 „
„	8	$9\frac{1}{2}$	20 „
Carpenters . . .	$7\frac{1}{2}$	9	20 „
Joiners	$7\frac{1}{2}$	9	20 „
Smiths	$7\frac{1}{2}$	9	20 „
Plasterers	$7\frac{1}{2}$	9	20 „
Painters and Glaziers .	7	$8\frac{1}{2}$	22 „
Plumbers	$8\frac{1}{2}$	10	$17\frac{1}{2}$ „
General Labourers . .	$4\frac{1}{4}$	$5\frac{3}{4}$	35 „
Scaffolders . . .	$4\frac{3}{4}$	$6\frac{1}{4}$	28 „
Plumbers' Labourers . .	$4\frac{3}{4}$	$6\frac{1}{4}$	28 „

It might have been expected that in trades where the Unions were most completely organised the greatest advances would have been secured. But this has not happened. While the number of the unskilled labourers is not limited by any necessity for a preliminary apprenticeship, it is they who have reaped the greatest benefit by the increased demand for labour. The rise in the rate of wages is doubtless due partly to the increased cost of living. The pay of those labourers whose wages were nearest to a mere subsistence-level has been most sensibly influenced by the changes which have led to an increase in the cost of articles of the first necessity. The price of labour, as I have so often reminded employers, in the very terms used by the father of Political Economy, is determined, not by the use of its organisation, but by its relative scarcity. In the instance before us, we see that the advance has

been most conspicuous in the case of labourers who have no trades' union organisation. Are we not, therefore, justified in the conclusion that trades' unions in the long run exercise but a small influence over the rates of wages in comparison with the inevitable and natural operation of an altered relation between the demand and supply of the necessary commodity of labour?

Let us now proceed to ascertain how far the cost of building has been influenced by the increased cost of labour. First, let us consider the cost of materials. Messrs. Lucas observe, 'The cost of materials fluctuates from time to time, but as a whole we find that the average cost is about the same as formerly, the reduction of duty on bricks, timber, glass, &c., being in our favour.'

Mr. Stephenson has kindly prepared a Memorandum showing the difference in the prices of materials in London between 1865 and 1875. Bricks and Portland stone are cheaper; in timber there is some increase; and in other articles there is a considerable augmentation of price.

Materials	In 1865	In 1875	Increase
Bricks . . .	34*s.* per 1000	27*s.* per 1000	20 *per cent. reduction*
Grey Lime . .	10*s.* per yard	11*s.* per yard	10 per cent.
Roman Cement .	1*s.* per bushel	1*s.* per bushel	
Portland Cement .	1*s.* 9*d.* ,,	2*s* 2*d.* ,,	26 per cent.
Portland Stone (at Deptford) .	2*s.*1*d.* per foot cube	2*s.* per foot cube	4 *per cent. reduction*
Yorkshire 3 inch .	63*s.* per 100 feet	83*s.* per 100 feet	30 per cent.
Middling Dantzic Fir, average price	75*s.* per load	80*s.* per load	7 per cent.
Archangel Deals . .	14*l.* per standard head	16*l.* per standard head	16 per cent. mean
Petersburg Deals . .	12*l.* 5*s.*	14*l.* 10*s.* ,,	Ditto
Lead, Milled Sheet .	21*s.* per cwt.	24*s.* per cwt.	14 per cent
Glass, Plate and Sheet	... ...	... ...	Advance about 20 per cent.

The increase of wages, according to Messrs. Lucas, ought to have been more than covered by the introduction of machinery for many building operations, for hoisting all materials, instead of carrying by hod, and raising by hand labour; for grinding mortar and for the execution of all kinds of carpenter's, joiner's, and mason's work. They say, however, that their experience shows that the cost of building has actually increased from 20 to 30 per cent., and this increase is entirely due to the small amount of work now done by the men, compared with what they did some few years ago. As an illustration of this they refer to the new station, hotel, locomotive works, and goods' sheds at York, which they have recently erected for the North-Eastern Railway Company. These works were of great magnitude and were superintended by one of the most experienced and able members of their staff. The materials were bought for less than the estimated price, and the introduction of steam power to an unusual extent—in fact, whenever it could be used—effected an immense saving upon the labour. But all these advantages were more than neutralised by the indolence of the men. A conspicuous instance is quoted. The labour upon the brickwork, which would formerly have cost 38*s.* per rod by piece-work, was estimated at a price which Mr. Harrison, the Engineer of the North-Eastern Railway Company, considered liberal for such work, namely, 3*l.* 3*s.* per rod. The actual cost was a little more than 5*l.*, or 1*l.* 17*s.* per rod more than Messrs. Lucas received from the Company. In this case, therefore, a loss of 55 per cent. was sustained upon the esti-

mate for labour. If, however, the men had done a fair and proper amount of work the cost would have been as follows:—

With wages at the price formerly paid, at the rate of 6*d.* per hour . .	£1 18 0	per rod.
Add 50 per cent. for increase of wages at present time	0 19 0	
	£2 17 0	

In point of fact, the actual cost, as before stated, was a little over 100*s.* per rod, and this notwithstanding all the additional advantage of the possession of steam-power. This illustration proves beyond all doubt that the men at the present time do very little more than half the work for 9*d.* per hour that they formerly did for 6*d.*

These experiences of a large building firm are corroborated, from a different and perhaps a more impartial point of view, by Messrs. Hunt and Stephenson. An opportunity of applying an accurate test to determine the depreciation or appreciation in the cost of buildings has recently occurred, Mr Stephenson having been called upon to make a close professional estimate of the cost of re-erecting an ordinary dwelling-house which had been built in 1865 for the sum of 5,000*l.* The building in question was demolished to make room for a Metropolitan Railway Extension, and it was ascertained that it would cost no less than 5,624*l.* to rebuild it in 1875. The following are some very interesting details as calculated by Mr. Stephenson:—

Estimate showing the Amount of Each Trade in a Building of an assumed Cost of 5000l., and the Increase in Cost of both Labour and Materials.

Labour	1868		1875					Proportion of Cost of Labour to Cost of Materials in the several Trades		Average Increase and Decrease in Total Cost in 1875 over 1865
	Apportioned value of each trade	Relative proportion of Labour and Materials	Increase in Cost of Labour		Increase in Cost of Materials		Decrease	Labour	Plan and Materials	
	£	£ £	Per Cent.	£	Per Cent.	£	£	Per Cent.	Per Cent.	£ £
Excavator	100	90 10	28	25	—	—	—	90	10	25 —
Bricklayer	1200	300 900	27	81	—	—	160	25	75	— 19
Mason	800	480 320	24	115	25	80	—	60	40	195 —
Slater	50	10 40	27½	3	20	8	—	20	80	11 —
Carpenter	400	100 300	24	24	7	21	—	25	75	45 —
Joiner	800	480 320	20	96	16	51	—	60	40	147 —
Smith and Founder	350	70 280	20	14	—	—	—	20	80	14 —
Plumber	350	88 262	25	22	14	37	—	25	75	59 —
Plasterer	400	240 160	27	65	10	16	—	60	40	81 —
Glazier	150	23 127	22	22	20	25	—	15	85	51 —
Painter	150	75 75	22		5	4	—	50	50	— —
	1955	2794		467		242				— —
				1956		100				— —
				2423		142				— —
						2794				— —
						2936				15 —
Fees of Quantity Surveyor, Local Authorities and Sundry other Fees, &c.	250				265					643 19
	£5000	£5000		£5624	Nearly 12½ per cent. advance on 1865.					620 5000
										£5624

Having given the results of the experience of large employers in this country, it may be interesting to you to know that abroad the diminished industry of the operatives under the same conditions has been even

more conspicuous. The following paragraph recently appeared in the *Times* newspaper:—

'At the time when prices were most inflated the work and wages of masons in Berlin were submitted to a crucial test. Between 1868 and 1873 the wages of this class of operatives were increased by 50 per cent. In the former year a certain number of masons were accustomed to dress 618 stones of a particular description in a week. In 1873 the same number of men dressed in the same time no more than 304 stones, less than half; and as they were paid as much for the smaller as the greater quantity, it follows that the cost of building a house in Berlin had more than doubled within a period of six years. A similar process has been going on, with more or less rapidity, in most of the cities of Germany and Switzerland. Professor Gustav Kohn, in a pamphlet recently published (*Deutsche Zeit- und Streit-Fragen. Heft* 77. *Vertheurung des Lebensunterhaltes in der Gegenwart, von Gustav Kohn. Berlin,* 1876), compares the cost of building in London and Zürich, and although there is no great difference between the two places in the price of materials, he arrives at the conclusion that it costs twice as much to erect and finish a house in the Swiss City as in the metropolis of Great Britain, and to this difference he attributes the fact that rents are so much higher in the latter place than in the former. In order to arrive at a just conclusion, he eliminates from his comparison the business and fashionable quarters, where the question might be complicated by the elements of expensive sites and heavy ground rents, and chooses in the most outward

periphery of the town a locality which is to Zurich what Wimbledon is to London. If the result of the Professor's investigations is to be trusted, a dwelling that at Wimbledon is rented at 40*l.* a year could not be obtained at Zurich for less than from 1,500 francs to 2,000 francs a year. And as wages, the cost of materials, the value of money and of land, are approximately the same in both places, it follows that the difference in rents must arise from the superior skill of English builders and the greater efficiency of English labour. This is the conclusion of Herr Kohn, based as well on induction as on his own personal observation and enquiries.

Mr. Howell contends that the net cost of building has not increased in proportion to the advance of wages. He points to the use of machinery in some branches, to the introduction of better appliances in others, and to the development of greater skill in special branches. As a rule, he considers that the foremen are much superior in ability and character to the majority of those who previously had charge of large undertakings. As an instance of work being done more cheaply, he refers to a statement made to him by a mason of considerable experience and skill to the effect that each of the blocks of the fluted columns at the British Museum cost, on an average, 5*l.*, whereas now he would be glad to undertake any number of them at 3*l.* 10*s.* each.

This reduction in the price of stonework for the British Museum would, however, only be possible upon the piece-work system. The introduction of piece-work

is earnestly desired by the masters; but, as Messrs. Lucas remark, 'By the rules and regulations of the trades' unions no set-work or piece-work is allowed, the great object being to obtain the largest amount of pay for the smallest amount of work and the least number of working hours; and with every increased rate of wages they go for a decreased number of hours' work in the day, and do a less amount of work in the hour, so that the public are hit all round.'

In concluding their most valuable Paper, Messrs. Lucas say: 'We believe the reduction of the hours of labour and the half-holiday a mistake. Any man wanting a holiday can always have it, and the old time of 60 hours per week in the summer months is not too much in such a generally healthy business. It appears absurd to lose the summer months and not make hay whilst the sun shines. In the winter time it might, perhaps, be better upon outdoor works to commence after breakfast, say at eight o'clock, and leave off at half-past four, with half-an-hour for dinner, making eight hours per day, or 48 hours per week, or an average for the year of 57 hours, and 2*l.* 2*s.* 9*d.* per week wages; and we have not the slightest doubt that the men would gladly fall into such an arrangement, but for the interference of the trades' unions. It is clearly to be understood that the foregoing observations apply to architectural buildings only, and not to contracting and engineering works. These are mainly carried out upon the plan adopted by the late Mr. Brassey, that of *set-work*. A certain amount of pay is offered for a given amount of work. The men are paid

for any work done in excess of the minimum amount allowed, and this is the only fair and satisfactory course to be adopted in the building trades in the interests of the men, the masters, and of the public generally.'

Having given in detail the successive advances in wages, and shown the increase in the cost of building, it will be interesting to inquire how far the condition of the operatives has been substantially improved by the rise in the rates of wages. Has there been any appreciable improvement in their food and in their dwellings? Is their leisure time profitably and innocently employed? Mr. Howell has supplied a complete statement on this subject. We will take first the article of meat. The rise in the price of meat is concisely shown in the subjoined table:—

Date	Average Prices					
	Beef—per stone	Increase	Per cent.	Mutton—per stone	Increase	Per cent.
	s. *d.*	*s.* *d.*		*s.* *d.*	*s.* *d*	
1847—1853 .	4 2½			4 5		
1853—1867 .	5 0½	0 10	20	5 9	1 4	30
1867—1873 .	5 6	1 4	30	6 4	1 11	43
1874—1875 .	5 8½	1 6	35½	6 5	2 0	45
1876—1877 .	5 11	1 9½	30	6 9	2 5	50

In round figures, the price of meat, wholesale in the market, has increased, in the case of beef about 40 per cent., mutton about 50 per cent. Pork has increased proportionately, and bacon at a higher rate still. The price obtained for beasts at the Annual Cattle Shows from 1847 to 1877 is as follows: From 1847 to 1856 inclusive, the average price ranged from 4*s.* per stone for seconds, to 5*s.* 7½*d.* for prime cattle. From 1857 to 1866 inclusive, the average price ranged

from 4*s.* 1*d.* for seconds, to 6*s.* 2*d.* for prime qualities. From 1867 to 1877 inclusive, the average price ranged from 5*s.* 6¼*d.* for seconds, to 8*s.* 1½*d.* for prime meat. During the latter period the quality of meat has greatly improved. On the other hand, the poorer classes have had to pay more per pound for inferior meat than the wealthier classes have paid for joints of the best quality. The retail price of meat to working people has been increased not less than 75 per cent., or oftener 80 per cent., and butchers are more careful than formerly not to cut to waste. Hence, there are fewer pieces called "block ornaments." This is equally true as regards slices of bacon. Poultry and fish have advanced in price nearly, if not quite, in the same ratio as meat. Rabbits fetch even a higher price in proportion. As for hares and other game, the poorer classes seldom taste such things. They know nothing of them, except what they see at the poulterers' shops.

Take next the items of bread, vegetables, clothing, and rent: The price of British wheat has varied from 50*s.* 6*d.* per quarter in 1848 to 74*s.* 8*d.* in 1855, the highest quotation during the past thirty years. Since 1864 it has varied from 40*s.* 2*d.* to 64*s.* 5*d.* in 1867. The average prices quoted for the last five years have been: In 1873, 61*s.* 8*d.*; 1874, 44*s.* 2*d.*; 1875, 45*s.* 3*d.*; 1876, 50*s.* 3*d.*; 1877, 51*s.* 9*d.* The ordinary baker's bread in the poorer districts is now 7*d.* and 7½*d.* per 4-lb. loaf. It has not been so low as 6*d.* per loaf for some years. Very inferior bread is nominally cheaper, though actually it is the dearest, in

proportion to the solid nourishment it contains. The prices of potatoes and other vegetables, as sold at the greengrocers' shops, have gone up during the past thirty years as much as 100 per cent. Potatoes, which were formerly sold at a halfpenny per pound, and then at the rate of 3 lbs. for 2*d.*, are now 1½*d.* per pound, being an increase of over 100 per cent. Cabbages, which could be bought at a halfpenny each, are now 2*d.* or 2½*d.* Turnips, which were formerly sold at 2*d.* per bunch, are now from 5*d.* to 6*d.* The price of parsnips has advanced from a halfpenny to three halfpence; and all other kinds of garden produce are equally enhanced in price. Coal, butter, and cheese are most important items, especially the two former. Many thousands of the working classes purchase their coal by the cwt., or in sacks. For some years past the lowest price charged per cwt. has been 1*s.* 6*d.*, or 30*s.* per ton. In 1872-73, the price went up to 50*s.* per ton. The coal consumed by the work-people is generally very inferior, and the purchasers are robbed in weight and measure. Those who live in apartments have seldom room for more than a sack at a time; but in newer houses room is provided for half a ton or a ton. The article of butter has ranged from 1*s.* 6*d.* per lb. to 1*s.* 10*d.* for inferior qualities, which are described as little better than mere grease. The consumption of salt butter has diminished of late years, and Brittany butter has been substituted. Cheese, which in days gone by was cheap, is now rather a luxury. It is not used by poor people as it was formerly. The only articles on which there has been a reduction are

sugar and tea; but most working people concur in saying that tea, as sold at the grocers, is not so good as formerly. House rent has greatly increased. Apartments of two rooms on a floor have gone up from 4*s.* 6*d.* and 5*s.* 6*d.* to 8*s.* 6*d.* and 9*s.* per week. The rent of single rooms has risen from 2*s.* 9*d.* and 3*s.* 6*d.* to 5*s.* and 5*s.* 6*d.* Small houses are very scarce. For a house with four rooms and a wash-house the rents have advanced from 6*s.* or 6*s.* 6*d.* to 10*s.* or 11*s.* Peabody's Buildings and the Model Dwellings are full to repletion; and so great is the demand for accommodation, that enough names are down on the books to fill several more blocks of houses. Boots and shoes are dearer, and the leather is not so good. These articles are of the first importance to working people, who have to work out of doors, or walk long distances. Clothing has also gone up in price, although not in the same proportion as other articles. Apparel, however, is usually bought ready-made by machinery, and as machine-sewing is inferior to hand-sewing, clothing is less durable. Cottons and flannels are cheaper, but stuffs and home-spuns are dearer, at retail prices, and the quality is much depreciated. Almost every little article of domestic consumption has increased in price. Though the increase in cost may only amount to a halfpenny, the advance is often equivalent to a rise of 40 to 50 per cent. on a small item. It is the universal complaint of the wives of workmen in the present day that they have a difficulty in "keeping house," in consequence of the dearness of everything. One of the

greatest evils from which the working-classes suffer is that, being obliged to buy in small quantities, they go to small hucksters' shops, or what are called "general shops," where they pay the best price for very inferior articles. The poorer the neighbourhood, the greater the difficulty in obtaining articles of good quality; and yet the prices charged are very nearly equal to those charged for the best qualities in the best establishments.

The well-managed co-operative stores of the North of England have provided a most effective means of supplying the wants of the working classes. In the metropolis co-operative organisation has been but slowly and imperfectly developed. Perhaps the very number of the population has made co-operation more difficult. Less cohesion, less interdependence, and less mutual sympathy will be found in the multitudinous masses of the metropolis, than in the more compact populations of our northern cities, where similarity of employment and a more uniform social status bind the people together, and both dispose and enable them to combine more readily for a common object. Mr. Howell concludes by stating that, with all the drawbacks which he has enumerated, the majority of workmen's houses are far superior to those of the same class thirty and even twenty years ago. There is an air of comfort and cleanliness, as a general rule, in the homes of the artisans and mechanics, which shows progress and improvement; and there are fewer wretched homes even in the poorest localities than of old.

I have given *in extenso* Mr. Howell's statement as to the economic condition of the operatives in the

metropolis. It affords much food for reflection. It has been shown in the tables prepared by Messrs. Hunt and Stephenson, Messrs. Lucas, and Mr. Howell, that, during the period embraced in our review, wages have advanced 50 per cent. for mechanics, and 64 per cent. for labourers. In the same period, however, the cost of living has increased in such proportions that the wives of the workmen have experienced an ever-increasing difficulty in making both ends meet. Mr. Howell, indeed, describes a general improvement in the interior of the workmen's houses; but that amelioration is probably due to advancing civilisation, rather than to the increased spending power of the people. Improved taste, more refined habits, and a more restricted indulgence in intoxicating liquors would have converted a great number of the miserable hovels of thirty years ago into comfortable dwellings, even though wages had remained at the former rates. The consumption of beer and spirits has, we know, increased of late years to a melancholy extent. There is reason to believe that a considerable proportion of the increased wages of the unskilled labourer has been misapplied in self-indulgence. Mr. Howell's remarks as to the improvement observable in the dwellings must be understood to apply almost exclusively to the mechanics; and we may venture to hope that the majority of the skilled workmen have made a good use of their increased wages.

The recent report of Mr. Plunkett on the railway riots in America gives most interesting details on the relation between wages and the cost of the United

States. In America, with every advance in wages there has been a corresponding rise of prices, while, owing to the fall in prices which has followed the recent reductions of wages, working men in regular employment have suffered no privation of the necessaries of life. Workmen are perfectly entitled to take advantage of every turn of the market in their favour; but it is a delusion to suppose that a general advance in the rates of wages, accompanied, as it must be, by a corresponding advance in prices, is pure gain to themselves.

In connection with this subject, I must once more express my conviction that an exaggerated impression prevails of the power of the trades' unions to advance wages by the mere completeness of their organisation, apart from other influences, which are more effective and more natural in their operation. In every controversy with the masters the trades' unions occupy a prominent position as the spokesmen and advocates of the workmen; but the trades' unions cannot possibly force the employers to carry on their operations at a loss, neither can they compel the public to buy an article or to build a house at a price which they cannot afford to pay. The wages of mechanics in the building trades have been rapidly raised and are now kept up solely by the constant demand for labour in those trades. The active prosecution of building operations seems somewhat inconsistent with the general depression in almost every other branch of trade. The cause of this apparent anomaly is to be found in the failure of Joint Stock undertakings and

the revelations of the Foreign Loans Committee. Until a recent period a large proportion of the savings of the country were being absorbed in the conversion of private manufacturing and trading establishments into corporate undertakings, and large sums were lent to weak and almost unknown governments, who had succeeded in alluring the too credulous public by the offer of high rates of interest. Experience has shown that Boards of Directors, with little personal interest in their work, and no technical knowledge, cannot take the place of an individual manager having a large stake in the result, and qualified by technical training and long experience to conduct a difficult business. The Joint Stock mania has now happily subsided, and it would be impossible, in the present temper of the public mind, to introduce on the Stock Exchange, with any prospect of success, a loan to a needy foreign State of the second rank. In the absence of other opportunities for investments, the savings of the country are now being applied to building operations. In the suburbs of the metropolis and in the environs of our provincial towns, long rows of houses are rising up built with borrowed capital. Timid people, who are afraid of employing their money in more distant operations, are satisfied with the security offered by a mortgage on houses erected in their own neighbourhood. They possess, in the form of a mortgage on buildings, a tangible security, and one the value of which they perfectly understand. Building has accordingly been carried on with unrelaxed energy, and possibly in excess of the wants of the public.

Meanwhile, the demand for mechanics and labourers has been sustained at a time when industrial operations generally have been contracted. Thus we see a strike amongst the masons for an advance of wages at a time when the only strikes which are taking place in other trades are strikes against a reduction.

Is the present activity of the building trade likely to continue? This is a question which well merits the attentive consideration of our workmen. Is it not an inevitable consequence of the continued depression of trade, that the savings of the country, which have lately been invested so freely in mortgages on new buildings, must be temporarily reduced in amount? If this be so, the demand for labour will slacken, and wages must ultimately fall. It is further to be observed that the depression of trade, which has been so serious in this country, has been still more marked abroad. There are large multitudes of skilled men without employment on the Continent. If they are introduced into this country, the English workman has no more right to complain or to resist than the workmen in France, who quietly suffered my father to take over a body of 5,000 English navvies to make the railway from Paris to Rouen. The bricks in the tunnels under the city of Rouen were all laid by London bricklayers.

It was argued at the recent conferences of the International that a general rise of wages can only be obtained by a combination among the workmen of all nations. The country in which production is dear will be driven out of the market by the production of other

countries in which work is done at a cheaper rate. The same principle applies to the building as to every other trade. Hitherto, owing to the difficulty of communication, the rates of wages have been determined by local circumstances. Railways have tended to diminish these local inequalities, because the supply of labour can now be drawn from an ever-widening area. In the ship-building yards on the Thames, the great mass of the joiners are Scotchmen, and there is but a slight difference between the wages on the Thames and on the Clyde. It is as easy to introduce masons from Hamburg as to bring joiners from Scotland. There need be no fear of the competition of foreigners with Englishmen if only the latter will be true to themselves. All workmen labour at a disadvantage in a foreign land, and I refuse to believe that foreigners will ever be allowed to gain a permanent footing in this country. The great evil in the organisation of the Building Trades in London has been the substitution of payment by time for payment by results. Piece-work under adequate supervision is the only system which is equitable alike to the employer, the workman, and the public. There can be no objection to mechanics earning 7*s.* or 8*s.* a day, provided they have fairly earned their high wages by a just amount of work. The employer will raise no objection to the payment of liberal wages provided he knows what he will be required to pay, and how much work will be done day by day. On the other hand, it is utterly wrong that good men and bad men should be paid at an uniform rate of 10*d.* per hour. It is a system which could only

have been forced upon the Building Trades by the unusual scarcity of labour. Such a system is only enforced by that evil spirit of jealousy, described with so much power by Dante, in the 17th canto of the *Purgatorio*:

> È chi per esser suo vicin soppresso
> Spera eccellenza; e sol per questo brama
> Ch'ei sia di sua grandezza in basso messo:
> È chi podere, grazia, onore e fama
> Teme di perder, perch'altri su monti;
> Onde s'attrista si, che'l contrario ama:

The passage is thus translated by Longfellow:

> There are, who, by abasement of their neighbour
> Hope to excel, and therefore only long
> That from his greatness he may be cast down;
> There are, who power, grace, honour, and renown
> Fear they may lose because another rises,
> Hence are so sad that the reverse they love.

The depression in trade to which I have already referred may lead to a contraction in building operations; and it would be well that the opportunity should be embraced for setting the relations between employers and employed in the Building Trades on that equitable basis on which business in every other branch of trade has been conducted. No industrial organisation can be sound in which, to use the words of Mr. Herbert Spencer, 'duty done and income gained do not go hand in hand, and the failure will be great in proportion as the dependence of income upon duty is remote.'

The conclusions to be drawn from our investigation may be laid down as follows:—

I. During the last thirty years there has been an

increase in wages of 44 per cent., and in the cost of building of 20 to 30 per cent.

II. The advances of wages have been largely absorbed in the enhanced cost of living.

III. The increase in wages has been caused by unprecedented activity in the building trade.

IV. The prospect of a more satisfactory organisation of the Building Trades depends on the adoption of an equitable system of payment by piece.

I have narrated the story of the rise of wages in the Building Trades with strict impartiality. Many of those present regard the trades' unions with a dread which I do not share. I can fully understand why it is that the trades' unions are not viewed with especial favour by the master builders, who have been perpetually thwarted. It is hard to have to yield to the dictation of irresponsible men, and to be required to pay wages at rates never contemplated at the time when contracts have been entered into. I sympathise with those who have suffered many losses and vexations, but I must point out that if the unions connected with the building trades have given trouble, it has been the consequence of a great and sustained demand for labour. For years past no skilled mechanic in the metropolis has ever known what it is to be without employment. Our ancient and noble capital has been extended with extraordinary rapidity. Almost everybody, who has been successful in a business or professional career in the provinces or abroad, has crowded into London, and made it year by year, more and more the centre of British society in all its various grades, and a place of

meeting for persons of every taste and pursuit, whether artistic, scientific, or literary. The man of pleasure and the severe student can here always find congenial companions and gratify their special tastes. It may appear that wages have been advanced under the pressure of the trades' unions, but competition among the masters for labour, of which there was an insufficient supply, has been the primary cause of its enhanced value. If the demand for buildings were to abate in any sensible degree, the price of labour would fall in proportion. The instance which I have quoted at Zurich shows what advances will take place in the price of labour under the same conditions in which the London builders have been placed, and that, too, in a land of exceptionally cheap labour.

Complaints are urged of the indifference of the trades' unions to the interests of the public. No doubt such organisations have been established to promote the interests of a class and not for the general good of society; but my experience of the motives and actions of the leaders of the trades' unions has led me to believe that, although their energies are concentrated on the single object of improving the position of their clients, they do not seek to promote their objects by violent measures. I attended the late Congress of the trades' unions at Leicester. I was the only man of my own order who did attend, and I can bear testimony to the admirable manner in which the proceedings were conducted. The programme of subjects for discussion was reasonable and appropriate. The questions which it was proposed to ventilate in Parliament were

fitting topics for parliamentary debate. There was a creditable freedom from class prejudices. Contrast the proceedings at Leicester with the debates of the International Society on the Continent, or the recent demonstrations in New York, where nonsense was talked of a kind which would never have been listened to in this country. Have any of the trades' unions of London ever maintained that, 'To protect the useful classes against the avarice of capitalists, or the derangements of trade, the various branches of useful industry should be instituted by the governments upon equitable principles, and thereby furnish employment to those who might be otherwise idle?' Has it ever been resolved at a mass meeting in this city, 'That the time has arrived for all working people to resist by all legal means the oppression of capital and the robbery which it perpetrates on labour?" My view is that we have in the English working people a body of men less likely to be led away by visionary ideas, less ready to listen to vague and envious denunciations, more strongly influenced by a sense of duty and more law-abiding than the corresponding classes in any other country. With all these merits, however, they are not exempt from human infirmity. The principle of self-interest is strong with them, as it is with their masters, and it is not always enlightened. They seek to sell their labour to the highest bidder, just as the masters demand the best price, which the very keen competition amongst themselves allows them to secure.

While I have pointed out the inevitable and disastrous consequences of a too aggressive action on the part

of the operatives, I am not an advocate of a too acquiescent temper of mind. The industrial capacity of workmen cannot be developed, unless they live in reasonable comfort, in houses in which they take a pride, sustained by adequate sustenance, and encouraged by the prospect of bettering their condition. It is not in countries where the standard of living is lowest, and the pleasures of hope are denied, that production is most rapid and economical. 'La pesanteur des charges,' said Montesquieu, 'produit d'abord le travail; le travail l'accablement; l'accablement l'esprit de paresse.'

I conclude with one practical suggestion. The labour problem will find its natural solution in an increased supply of labour. It is for this purpose that a handful of foreigners has been lately introduced; but would it not be more easy and more satisfactory to train up the youth of our own country in greater numbers to be skilled handicraftsmen? It seems to me that the reluctance to perform manual labour is a great and growing evil, an evil which has its origin, not so much in a dislike to hard work, as in that false social system which gives to the man at the desk a higher rank than it accords to him who stands in a fustian jacket at the mason's bench. I am a warm friend to popular education, but let us guard ourselves against its attendant risks. Let us take care that the educational advantages which we are now giving to the people are not perverted.

Mr. Plunkett quotes from the *Philadelphia Times* some very pertinent observations: 'What a terrible

satire upon our boasted free school system is conveyed in the word "educated!" Our children have their poor little brains crammed full of all kinds of impossible knowledge of names, and dates, and numbers, and unintelligible rules. There is absolutely no room left to hold any of the simple truths which former generations deemed more important than all the learning of the books. The result is that they leave school ignorant of what is most essential, and outside of the schools there is no provision for their learning anything.'

It is by a courteous bearing in all the relations of life that the privileged classes can best testify their sense of the real dignity which attaches to honest labour, and show their conviction that the skilful labour of the hands is not inconsistent with culture and refinement.

APPENDIX.

Discussion on Mr. Brassey's Paper—The Rise of Wages in the Building Trades of London.

THE CHAIRMAN (Mr. G. E. Street, R.A.), in opening the Discussion on Mr. Brassey's Paper, said:—I am sorry to find that Mr. Brassey is unable to be here to-night in order to share in the Discussion. I dare say we have a good many strangers who are not members of the Institute, and in order to facilitate the wish of any who may desire to join in the Discussion, I will ask them to send up their cards, and I will call upon them in the order in which they do so. We have Mr. George Howell present, from whom Mr. Brassey obtained some valuable statistics; and perhaps, if he has no objection, he will, as a representative of the working-classes, open the Discussion.

Mr. GEORGE HOWELL.—I did not expect to be called upon to open the Discussion. I thought that opportunity would fall to some member of the Institute. I certainly did give Mr. Brassey a number of facts for his Paper, and he has acknowledged that I did my best to give them exactly as they were, so that the Institute might be able to come to a proper conclusion. It seems to me there is not a better body in London to deal with this question than architects; they hold, as it were, a neutral position between builders and contractors on the one side, and the men upon the other. With regard to the facts of the Paper, their accuracy has been acknowledged by the architects and by a large building firm to whom they were referred, so that it will not be necessary to go into them. There are one or two clerical errors, which

I will hand to the Secretary, but they are not important. The more important point that arose out of Mr. Brassey's Paper was the alleged want of earnestness on the part of the men at their work. Now, Sir, it will not be necessary to enter into a long argument to prove that a large part of this dispute turns upon piece-work. The architects of London know full well that in building operations it is almost impossible to apply the principle of piece-work throughout a building. There are certain departments in which it can be applied; but I ask any architect who knows anything of his business, how it is possible to apply the principle of piece-work with regard to the brick-work of large buildings? There may be instances in which it may be applied, such as arches; but to apply the principle of piece-work, or task work, or anything of that kind, it must assume the particular form of a number of men combining, and taking a portion of the work and dividing the profits among them. Absolute piece-work—that is to say, each man doing his own work and receiving payment for his portion—is next to impossible in many operations in the building trade, and particularly in regard to the bricklayers' part of it. It can be done to a certain extent with the masons and amongst the joiners, but taking the building trade throughout there are many difficulties in the way of its application which cannot be got over. I contend that the principle of piece-work can only be applied where the man can bring his own energies to bear upon the work, or a particular portion of it, and complete that work by himself. He is then responsible to himself alone for the amount of work done, and to the master for the way in which it is done. A tailor and a shoemaker can do this, and in some parts of the building trade it can be done also; but many of the difficulties on the part of workmen with regard to piece-work, so far as I have been able to understand them, have arisen from the difficulty of applying the principle throughout the building. I have had experience both as a man and as a foreman, and to some little extent as a master, but I have not yet been able to see my way clear to the application of the principle of piece-work during the entire

progress of the building. I will now go to the other question, which, I think, is one of the most disastrous allegations that is, or can be, made against the British workman—viz., that he skulks at his work, and does not endeavour to give a fair equivalent for the wages he receives. Now, Sir, I am prepared to admit that there is in human nature (and I am afraid that applies to all human nature, and not particularly to the working man) the desire to get as much money as possible for as little work as possible. Every man in his own particular way strives to get as much money as he can for the least amount of work. Allow me to explain. It depends entirely upon the way you apply that principle. If a man has a certain amount of work allotted to him, and he shirks it, and still tries to grasp the money for it, it will not apply universally, but in a broader sense it does. What I affirm is, that this statement, in the sense in which it is used against the working men of this country, is untrue with regard to them, just as much as it is untrue with regard to all other classes of the community. The difficulty of testing what amount of work a man should do is not a small one. Take the occupation of brick-laying. A great number of people with whom I come in contact have got hold of a notion that the proper number of bricks for a bricklayer to lay per day is a thousand, and that he ought to do that each day. I need not say to any practical man, whether builder or architect, that in some cases a bricklayer can do this without great pressure, but that in others he cannot. It would, in some cases, be harder work, in the more complicated parts of a building, to lay three hundred bricks, than a thousand in others. Everything depends upon where they have to be laid, and the style in which the work has to be done. The difficulty of gauging the amount of work is so great that much misapprehension has arisen. When collecting these facts for Mr. Brassey, I talked to a number of men as to the amount of work done by individuals twenty-five and thirty years ago and now, and the answer I have had in almost all cases with regard to skilled men has been, that their work to-day in quantity and quality will bear comparison with that done at

any former period of their history. The only exception has been where there has been a kind of nigger-driving, such as that formerly practised in the outlying districts by persons called 'sloggers' and 'jerry-builders.' There was a time when a few men were paid sixpence per day to 'run' the other men, so as to cause them to run up a certain quantity of work in a given time, but that has been abandoned. The men to-day are usually allotted their work according to their trades, and I venture to say further—and I say it in the presence of men who are competent to judge—that if the workmen of London do not do their duty to-day, the fault is not so much with them as with the incompetent foremen put over them, although even this is not so general as it used to be. A foreman should know the quantity of work that every man should do, and the aggregate amount of work that the men combined should do; and it is his duty to see that every man is put in his proper place. If the men are properly arranged in places suited to their special skill and ability, I venture to say to-day that the men will be able to do as much work, and would do it as well, as they have ever done at any former period of their history. With regard to the particular fact stated by Mr. Brassey that occurred at York—I do not wish to say one word that may be construed as disrespectful to the gentleman who supplied that statement—but I venture to say that it is very difficult indeed for a body of gentlemen, upon an *ex parte* statement such as that, to come to any definite or proper conclusion. There are many circumstances that would have to be taken into consideration, and it would be necessary for a man competent to judge to know the details before coming to a proper decision. Why, Sir, I have had to test a great number of those conclusions printed by Mr. Greg, Mr. Thornton, and other gentlemen, with regard to trades' unions, and I venture to say that ninety-nine out of every hundred of the allegations made against these societies are not true in the sense in which they are stated. I say that after having examined them. Here is one of them, quoted by Mr. Greg and Mr. Thornton, and bandied about all over the country with regard to laying bricks with both hands. Why, it has

been a matter of wonder to me how any body of men, or how any single man with any knowledge whatever of building operations, could talk about 'one-handed bricklayers;' and yet *Capital and Labour* printed some absurd story, taken from an American paper, on this subject of 'one-handed bricklayers.' What is the absolute fact? Practically it is as difficult for a man to lay bricks with both hands as it is for a clerk to write with both hands. It is only in very few instances that a man is able to lay down his trowel and take up the bricks with both hands, and that is on wide walls, footings, and the like; where he can do this, there is no rule against it. Supposing he were eternally in the habit of putting down his trowel and of taking up the bricks with both hands, those of you who have never handled a trowel except in kid gloves know little of the result. Bricks are hard and gritty, and not only so, but it is necessary to have them thoroughly saturated with water, especially in walls where cement has to be used. Now, the inevitable result would be this, that in course of time the thumb and fingers of the hand which has to hold the trowel would become so chapped that the thumb would be nearly useless. He then could not easily go on with his work, and the result would be that instead of gaining in quantity he would lose in quantity and correspondingly in skill also. The difficulties of putting down and taking up the trowel are small things in themselves; but a practical man knows them, and he will smile at the absurdity of such an allegation against the trades' unions. I do not mean to say that trades' unions have not some stupid rules: in the past many stupid rules have been got rid of; but let us attack the rules that are absurd, and not waste our time in going off into side issues.

Mr. Samuel Hill, Visitor.—As the author of a Paper on 'The Freedom of the Labour Market,' which I had the honour to read in the Grand Jury Room of St. George's Hall, Liverpool, before the Historic Society of Lancashire and Cheshire, when the late Sir William Brown, Bart., M.P., presided, I venture now to make a few remarks. In that Paper I ventured to make allusion to the strike of the

operative masons when that magnificent pile, the Law Courts of Liverpool, was being erected, and I made bold to state that that strike contributed to the failure of the contractors for the masonry. I am sure that it is a very important question for the members of trades' unions to consider whether it is not desirable that something like fair play should be shown as towards masters by men. As a Lancashire man I am a great admirer of fair play, and I believe there should be more consideration for the masters shown than has hitherto been the case. It is quite true that capital can do nothing without labour, but it is capital that calls labour into exercise—the designer (such as our worthy Chairman) to plan, and the skilful hand to execute. If we thought more and strove more for the union of capital and labour, and accomplished it, I believe that the interests of this country in a commercial sense would be fully maintained. As regards the rise of wages in the building trade, you must not forget that there is an important factor which has been altogether ignored here, and that is the lessened purchasing value of money. You are well aware that in the present day you cannot lay out a sovereign as you did a quarter of a century ago. Perhaps clothing may be a little cheaper, but articles of consumption and rents are dearer; and these prices are not regulated as the members of trades' unions attempt to regulate their prices, by artificial regulations or restrictions of their own. They are the result of the universal law of supply and demand. You may as well try and make water go up a hill without hydraulic pressure as to cause wages to rise unless there is a demand for the labour that earns them. In 1859 there was a strike of the builders in London; and, if you will permit me, I will read you a few extracts from my Paper referred to:—

'A principle to be just and equitable, the converse of it must hold good; and is it reasonable to expect such a total abnegation of self-interest on the part of the hirer required in his contract to pay a fixed and uniform rate of wages, determined by a small clique, irrespective of the ability of the men, or the state of the labour market at the time, which, like all others, ought to be

regulated by the universal law of supply and demand, when the hired are at liberty to transfer their industry where, and in many cases when, they choose, or with a very brief notice?

'The egregious impropriety of this is apparent if duly reflected upon, and how often the period selected for a strike is when the employer is saddled with a heavy contract, extending over a long space, and taken on the basis of a fair steady rate of wages, and, in addition, materials rising, with a certainty of a penalty being incurred if not fulfilled in the stipulated time.'

I have taken a great interest for many years in the welfare of working men, for I am the son of a working man, and having been at the bench in my native town of Preston in my early youth, I may claim to speak with some knowledge of the question. I remember, when a lad of seven years, on going to school, I was attracted by a demonstration in Canal Street, Preston, and it turned out to be a lot of people coming out on strike. They were crying out against improvements in the machinery for cotton-spinning—the self-acting mule—forgetting that 'necessity is the mother of invention.' That is a lesson to those in our day whose tendency is to work in the inverse ratio of the amount of their earnings. The more you pay a man beyond what is his legitimate value—because there are bricklayers and bricklayers—the more you may outrage every true principle of political economy. There are men who are skilled, and who are entitled to good wages; but an attempt at levelling will be disastrous in every respect.

'It is notorious to every watchful reader, that combinations or strikes can be almost invariably traced to the acts of an individual called the secretary of a club, or trades' union, whose word is law; and when his fiat has gone forth, none of its members dare say, "What doest thou?" If proof be needed on this head, I will quote the manifesto dated July 25, 1859, of Mr. George Potter, Secretary of the London Operatives Building Trades, viz.:—

'"The Master Builders having refused to concede the nine hours as a day's work, the Conference of the United Building Trades have been directed by the members of the movement to

call upon a firm to cease work. Having done so, they now appeal to you to aid them in supporting the men now on strike at Messrs. Trollope & Sons. It is earnestly hoped that no workman will go in to supplant them till they have obtained their object—"It is expected that every man will do his duty."

'So far as the great body of the building operatives were concerned, they were ignorant of the parties whom they were called upon to obey, as shadowed forth in the document just read, nor has it yet publicly transpired who were the members of this secret conclave. The object of the strike, to get ten hours' pay for nine hours' work and to give additional employment, is too fresh in your memories to demand from me more than a passing notice.'

What I would recommend is, that you should teach the children in our elementary schools the principles of political economy. I trust that working men will consider their position. I who have pleaded the cause of charity in the Metropolis and elsewhere, tell you that charity is twice blessed: "it blesseth him who gives and him who takes;" but I would say distinctly that the 150*l.* taken on Saturday by the operative masons on strike from the Bricklayers' Union could not have a blessing attached to it. It was a premium, not to idleness, but to neglect of work. I believe there is a dignity in labour, and the more you labour the more you will conduce to the greatness of this country, and the more you will promote your own moral worth and comfort.

Mr. Horace Jones, Fellow.—I regret not to have been present on the last evening, when Mr. Brassey's Paper was read, but in the interval I have had the pleasure of perusing it; and, whilst there is much in it that one cannot help appreciating and admiring, yet it is not so perfect as I expected it would be from Mr. Brassey's well-known talent. He seems to have been hardly the physician who sees the cause of the disease, and relieves if not cures the patient. One of the speakers struck a very important key-note when he spoke of the enhanced price of provisions, but even he omitted the importation of gold and silver which is a factor

in this question. Now, between 1865 and 1875 there has been an accumulation of bullion, of gold and of silver, in the country of between 40,000,000*l.* and 50,000,000*l.*, and that must necessarily give some increased price to almost every article. A great many articles have been kept down in price by the application of machinery, which often utilized the labourer at the expense of skilled workmen; but it is a natural thing that the workman should have his wages increased, and we know how liberal contractors are. They are always liberal enough to put 25 per cent. upon the men's wages without being asked for it; and I have no doubt that is the origin of strikes. There is another thing that need never have occurred if something like the old spirit prevailed which used to animate the master tradesman of fifty or sixty years ago. He had two or three apprentices, skilled workmen, in his own trade, whom in all probability he paid weekly, whether in good work or in bad, fine weather or foul weather, all the year round; and with half a dozen of this class of men, and his sons, and two or three apprentices, he readily defied any strike. It is this class of men, and none more likely, that must have carried out the designs of such architects as Sir William Chambers and Sir Christopher Wren, for the names of master masons and plasterers, &c., are found in books of the period relating to these works, because in that day they did not occupy the ignoble position in their craft that they do in ours. There was one point that occurred to me in listening to Mr. Howell, and that was as to the motives with which men labour. I have faith enough to believe that many go about their work with a feeling quite irrespective of what they are to be paid when it is done. Some men, I thoroughly believe, do their work fairly and properly. There is one peculiarity I should like to mention, which is this: that though there is an importation during these fifteen years of so large an amount of gold, there has been no corresponding increase of taxation between 1865 and 1875. In the former year the rate was 2*l.* 10*s.* per head, and in the latter 2*l.* 10*s.* 5*d.*

Mr. GEORGE POTTER, Visitor.— Before I come to the Paper

read by Mr. Brassey, I should like to say a few words in reply to the gentleman whose opinions have been so generally endorsed in this room—Mr. Hill. By what he says it would appear that working men are always trying to secure rights for themselves regardless of the rights of others, and he gives you an example which fortunately, I suppose, it happens I am here to listen to. He tells you how the great Lock-Out occurred in 1859 through one man, and that man myself. It is well that he should be corrected in this mistake, because I am sure there are many here who know very differently. [The statement of Mr. Hill is embodied in what he read.] Although I played a humble part in that Lock-Out, yet it only occurred after due deliberation through every branch of the building trade. Two alternatives were presented—either to cease work or continue work. A large majority of the building operatives through their delegates declared in favour of ceasing work. I, with many of the other leading delegates, was opposed to that, and urged as far as we could the advisability of continuing to work until a proper settlement might be made. So much for the great Lock-Out of 1859 taking place through the dictation of one man and that man myself. [Mr. HILL.—Was not your signature attached to any document?] [The CHAIRMAN.—I hope you will abstain from personal remarks.] I do not wish to throw any acrimony into this Discussion, but when it goes forth that I was the cause of that strike twenty years ago, I think the actual facts should be stated. In the same way it is quite right that a body of British Architects should understand that it is not true, and that no strike can occur of any magnitude without the sanction of the trade in which the strike takes place. It is not in the power of any secretary or any officer to create a great strike. I hope that misstatement, now that it has been corrected, will never be repeated, because it is likely to mislead those who want amicably to arrange the differences between capital and labour. The question is too great to be led away by such one-sided statements. Now, Mr. President, there is very much in Mr. Brassey's Paper that we can all agree upon. He is a man who has given considerable

attention to this matter and able to give an opinion, because he always tries to speak without prejudice. But we must always remember that there are two stand-points to the question: the one that of the capitalist and the other that looked at from the side of labour. Through these two stand-points, of course, the questions are generally decided. Now it is not correct to say that trades' unions are opposed to capital. You never hear any of the leading men amongst them denouncing capital. Unwise things may be said to that effect, but they are not correct. It is necessary that capital should exist and that labour should work for it and share the rewards produced by the united result. All difference arises on the point of what share of that result should go to capital and what to labour. You have mentioned that within the last thirty years the wages of the building operatives have advanced 44 per cent. I do not think that is a very exorbitant advance. If you trace out the facts you will find that in the same period capital has gone up 250 per cent. and therefore the other advance of 44 per cent. is not an unreasonable one. We must never forget that the men have as much desire to get as much as they can for as good work as they can do, as the master has to get a good profit for his outlay. The question is, as I said before, What is the fair profit and what is the fair wage? Is it to be supposed that the workmen should remain to-day as they were thirty years ago? Would the architects be as satisfied as they are with their work? Certainly not. I consider that the improvement which has taken place among the building operatives must be as much calculated to benefit the capitalist and employer as it is to benefit the workmen themselves. As to the employers' interests being more neglected—I maintain the contrary. You charge us with suggesting that every man should be paid alike: nothing of the kind is done. The trades' unionists are a minority, and in fixing a minimum they find that men outside can work for whatever wages they like, and there is not a master builder or architect but knows that in the building trade there are a great many men who work under 9*d.* an hour, which is the minimum as it is also

the maximum. It is seldom, you know, that a master pays more than the minimum price to a skilled artizan. What I want to enforce upon the Meeting is this, that the master builders always know the best men and are willing to take them at the minimum price. It is far more profitable to have a good workman at 9*d.* than an inferior man at 7*d.* or 8*d.* Everybody knows now, that when it is represented that we desire all to be paid alike, it is a fallacy. Mr. Howell very forcibly put the question of piece-work and showed that in many branches of the building trade it is impracticable. Joiners can do it, as for example, in making sashes, of which when finished those engaged upon them can divide the proceeds. But here is the point, that if it is found they have earned too much they must do the next job cheaper, or they must go back to day work, when they will be expected to do as much as when working might and main, having a prospective benefit in view for themselves. Hence two practical evils evidently arise out of that—either reduced wages and harder work, or more work expected from the day time system. Consequently where piece-work is taken up it ought to be on a fixed scale, that shall not be altered by the will of the foreman or the desire of the employer. Now a word about overtime. I have worked in a shop when I have at last actually gone to sleep upon the shavings, working from five in the morning to eleven at night, and whilst I was sleeping my employer had to pay me. Was that right? and there were scores of men in the same case. I say overtime was unprofitable to the master, a curse to the man, and a nuisance to society, and therefore in doing away with systematic overtime we hit a blow at a bad system. When you look at the differences between masters and men you must understand that it is not always the men who are in the wrong. Why don't you tell us something about the extraordinary differences of the contracts of master builders? You tell us of the differences in wages—why not in this? Look at the great job now in progress—the Law Courts. We all know that the highest estimate was 1,000,000*l.*, and that the lowest was 720,000*l.* —nearly 300,000*l.* less, and the man is now executing the

contract. If the man could do that and pay fair wages and find good materials, and have the work profitably done to himself, what must have been the man's profit upon the million sterling? Taking a smaller case—the building of a Board School for 10,000*l.*, I find there is a difference of 2,000*l.* in one estimate. One man will do it for 10,000*l.*, another for 8,000*l.* If the lowest can give good wages and find proper material, then I say it is right we should understand where the difference is. I quite agree with Mr. Jones that the old relations between masters and men are dying out. When I first came to London one master might only do one branch of the building trade and employ a few men and apprentices and pay them what they were worth. Now you have giant firms that override the small builder, and they pay foremen and middle men to come between employer and employed, putting man against man, setting one part of society against the other, and then you complain of the evils this sort of thing creates. Surely if the old system of relationship between master and man has disappeared, the day system been destroyed, the hour and minute contract introduced, upon what understanding, I ask, will the future work of this country be carried on? Let me tell you that honest English artisans do not desire to oppose their masters, or vex, or annoy them. They are, as far as I know them, willing to work as well as they can, but they desire some small advantages from the great increase of wealth and the great progress of civilisation. These are the reasons why the men try to get their labour dignified, their homes comfortable and happy, and themselves physically strong, artistically trained, and technically educated, to enable them to execute their work in a satisfactory manner to their employer and with advantage to their country.

Mr. Lucas, Visitor.—I should be sorry to say one word against the operatives. We have profited largely by them, and they, as a rule, have behaved extremely well to us, and it is only from the sense of duty I feel towards you and towards the public that induced my firm to supply Mr. Brassey with the information he called upon us to give. That in-

formation has not been disputed. All Messrs. Howell and Potter may say, if they talked till Doomsday, will not alter the fact that the men do not now do a day's work. Mr. Howell has suggested that the cause of the small amount of work at York was probably due to a bad foreman. Now I have only to mention the name of that foreman—Mr. Clemence, one of the most able men of his class, and who has satisfactorily carried out many of the largest works that we have ever undertaken—to show you that in this supposition Mr. Howell is mistaken. [Mr. HOWELL.—I did not refer to him personally.] Not to him personally, but to the foreman. No doubt, it is a painful thing to Mr. Howell and to Mr. Potter to have to disclose this, but not more painful than it has been to me; but still the information that I give to Mr. Brassey, I am bound by, and am prepared to prove, even though it may appear to you, as it did to me, past belief. It is not only that it refers to the particular work under consideration, but to all out-door work in the building trade—not shop work, because as you well understand, the great bulk of work in the shops is done by machinery; neither does it refer to engineering works. Now Mr. Howell talks of being a working man, and Mr. Potter does the same; but, gentlemen, I would ask—what am I but a working man? I began life—as your President, Mr. Barry, well knows—working for six shillings per week. I never had a shilling but what I worked for, and I attained my present position step by step, by using such ability as I had to the utmost, and by making the best friends I could of my employers. But whatever ability a man may have for his business, and whatever his sense of honour, and however desirous he may be to become a man amongst men, I defy him to rise to such a position under the rules and regulations of trades' unions. It may seem like an attempt to speak boastingly, although nothing could be further from my wish, but I do not hesitate to say that my position has been made by my own energy, and by my own freedom of labour. I have given you, through Mr. Brassey, a statement showing the cost of labour and work done, at 6*d.* per hour, and the cost at its

present rate of 9*d.*; and the result, which is arrived at from books most accurately and carefully kept, and to an examination of which I invite any of your Council, is broadly that there is now little more than half the work done for 9*d.* that there was formerly done for 6*d.*—a fact which I am prepared to prove. The only way, in my opinion, to adjust this is by the use of additional machinery and by piece-work. I do not for a moment desire to run down the value or the rate of labour. It is perfectly immaterial to the master what he pays a man, provided the public will repay him (the master) for it. But will the public do this? You are told by one of their own spokesmen that it is natural for all men to do as little as they can, but I deny Mr. Howell's assertion that it is the feeling of all men to do as little as possible for the largest sum of money they can get. I feel that I owe my success in life to the great industry and to the good example of my parents. They never allowed their children to be idle, but I maintain that it is now the system with the workmen —and what an example for their children for the next generation!—to do as little as they can for as large a sum of money as they can obtain, and for the shortest period of time! I should like to put this to the wives of the men—and it is an exact simile. What would a woman think if she went to a baker's shop for a quartern loaf, and found that its cost was 9*d.* instead of 6*d.*; and not only that, but that they gave her a half-quartern instead of a quartern for her 9*d.*? That is practically the case with us. We pay more and get less, and in these proportions. I quite agree with Mr. Potter, and I think his proposition a reasonable one, that piece-work should be set at such a price that the men can well earn good wages and live. I do not know that the Council of the Institute of British Architects could be better employed, with the assistance of their experts, the surveyors, if they would do so, than in framing, as between the masters and the men, what would be fair prices for labour. Let me assure Mr. Howell and Mr. Potter that I will give the men all I receive for their labour, less ten per cent. for my capital and risk, and for my personal attention to the business. I venture to say that the em-

ployers are the best friends of the men. No firm in the trade has employed more men than we have done, and neither my brother nor myself ever said or did an unkind thing to a workman. We have always endeavoured to treat them in the best possible manner. I will give you an instance of the prejudicial effect of the existing state of things upon brick-working and masonry. The moment a man gets to a point when you cannot get anything fair from him the profession will set their wits to work as to how they can best do without him. My firm is now carrying out a large dock, the walls of which would formerly have been built in brick-work and stone-work. At present we are using upwards of half a million yards of concrete in the place of brick and stone. What does this mean? It means a million in money in brickwork, or 2,000,000*l.* of masonry lost to the workmen. It is all done in concrete, and so it will go on. We have a work adjoining the Charing Cross Railway Station, where it was intended to use a quantity of stone, all of which has now been done away with. I am quite sure that no professional man would wish to have a stucco front, which, as a rule, is done either to save money or to cover over some scamping brickwork, if he could use stone. And why cannot he? Because the cost of labour is so enormous. No doubt this difficulty will be met, as in the case of joiner's work, by the introduction of more and more labour-saving machinery; but what I want to impress upon the men and their representatives is, that it is utterly impossible—I do not care who the master is, and no one can be more anxious for the welfare of the men than myself—that things can go on if third parties are allowed to interfere between masters and men. It is just like a third person coming and dictating between man and wife. Constant interference produces constant ill-feeling and quarrelling. The same thing applies to the interference of the leaders of trades' unions. You never know where you are. If you can settle what is a day's fair work, keep to that by all means. I do not care if it costs a sovereign, neither will the public, if they get value for their money, but I do not hesitate to tell Messrs. Howell and Potter that the public

feel that they are not getting value received, and that this must therefore end in the stoppage of works. Mr. Howell suggested that it was all nonsense about men using two hands to their bricks, but it is not nonsense, for I know it to be a fact. Mr. Potter also asserted that it was all nonsense about the men having the same rate of wages—I know it is not nonsense, as I know this also to be a fact. They do claim the same rate, and instead of 9*d.* being the minimum, it was agreed by masters and men together that it should be the maximum for first-class hands. It is unfair as an all-round scale. I am very glad to find that they are ashamed of this claim and have withdrawn it—if it is withdrawn. The idea of keeping men at the same rate does not mean bringing the bad to the level of the good, but the good to the level of the bad. I do not hesitate to assert that there are as good mechanics in this country as anywhere in the world, but the men must put their confidence in their employers in the same way that we do in those from whom we obtain our contracts, and the men must in a measure be led by us. With regard to the cost of their labour, I have stated that I am quite prepared on behalf of my firm to give them all that I receive for their labour, less ten per cent. for the interest of my capital and risk, and for my personal attention to the work. If not satisfied with that, then I would suggest to Messrs. Howell and Potter—and they have enormous influence over working men—that it would be wiser and better, instead of sacrificing an enormous amount of money in these constant strikes, if you think you are not getting a fair share of our profits, to form a co-operative building society of your own. You might become masters, and I will venture to say that you would not be in business a month before you would upset your trades' union rules. So far from opposing you, I would help you to try what you could do. I assert boldly and fearlessly that the masters, as a rule, know too well the value of good men not to treat them fairly and properly, and it is the desire of the masters to pay them not only liberally but handsomely. At the same time they must get a fair return for their money, and in the building trade this applies as well

as in everything else. It is stated that there is a great danger that piece-work may be 'scamped,' but that is a matter of supervision. I do not think it is dignified of the men to say that it will be 'scamped,' for they must be scamps who scamp it. I do not believe it would be more scamped than it is now. The difficulty that we have is the unfair position we are placed in. I know—and no one knows better—that we cannot estimate the cost of labour. We cannot contract for it without putting on such an enormous margin that will either lose us the contract, or in all probability, if that margin is absorbed, will be doing an injustice to the public. I think that it ought to be known, and it is very simple to a man who understands his business, what is a fair day's work for a man to do. Mr. Howell suggested that a man in a day will place a certain number of bricks. I can go round with any of my people and say 'I think that work is worth three guineas a rod,' but we have had to discharge men because it has cost about 5*l.* a rod, and this the most simple kind of work—the result being simply astonishing. This is known even to householders. Sir Henry Hunt spoke to me about it, and expressed very much the same opinion, that he could not now justify the cost of the work with the labour. I do not think we have sent out an account this year in which we could justify the cost of labour included in that account. That is a painful thing for me to assert, and I thoroughly believe that Mr. Potter knows it to be true. [Mr. Potter.—You ought not to say that.] No doubt there has been a great success in our trade; we know that half London, with its suburbs, has been rebuilt within recent times. Look also at the great engineering works and railroads, and the enormous amount of business, all created and carried out during our own time; but I want to warn the men that these works, although they have not come to an end, are not what they have been. It is not for them now to trifle with the public, although we admit that they ought to receive every consideration. They should have a fair share of the profits with their masters, but it ought to be settled what is a fair day's work and what is a fair day's wages. I am sure that

every employer wishes to pay them fairly, but to continue as we are going on now is utterly impossible. What has kept up the enormous cost of provisions? Why, it is clear to my mind—the enormous cost of labour—and it is those with fixed incomes who feel the burden. It is not the builders and the men who have had all the advantage of this increased cost and wage. If you persuade a ploughman that he should not plough so much land, and that he should demand more money for the lesser quantity of work, of course the cost of provisions must rise. I venture to lay before the men in all kindness, and with the best possible feeling, that it is to our mutual interest to adopt piece-work, provided that we can agree to a fair price, and that all piece-work, when done, should be well done, and a credit all round; and let me pay such a price that the men may feel a pride in their work, and turn round to a 'scamper' and say, 'Be off, or we will expose you.' That is the tone and feeling that ought to exist amongst working men. That was the tone and feeling when I was young. I have worked as hard as any of you, and I defy any man in the union or outside it to say that I have not been a kind and considerate master. I am prepared to give them a fair share of the profit, and nothing distresses me now more than to see the error they have run into. My remarks do not apply to a large number of men in my employ. I have a very large number who have been with me from the time they were boys, and now they are getting old men, and their sons are in the firm and doing well. On our large engineering works we have no difficulty in getting the work done. I have never attempted to screw a man down because he has earned too much. If he has made the best use of his time he deserves his reward. As to the hours of labour, there is no firm, perhaps, more responsible for their shortening than mine. I thought it was desirable to let the men work only nine hours, and I am prepared to say I made a mistake. I judged the men by myself, and thought that if they had a half-holiday and an hour less to work each day, they would work with increased will during the remainder of the time, but it has not proved so, and I do feel very strongly

that it has been a mistake, both for the masters and for the men, and also for the public, to knock off work in the summer time, which is the only time we can work on certain out-door buildings. I am prepared to give my men the same rate of wages in the winter time and shorter hours if they take full advantage of the summer. If I consider them in this way, I do not think it unreasonable to expect that they should consider me in return. If I have said one unkind word about the men I have not intended to do so: I have spoken from a sense of duty and more in their interest than my own. I have now arrived at a position that it will affect few men less than myself what decision they may come to, but with all friendship and affection I give them the advice I give to my own boys—'While you do work, work well, and what you do, do well.'

Mr. I'Anson, Fellow.—This discussion has been very instructive. The temperate way in which Mr. Howell and Mr. Potter made their remarks struck me very much. Mr. Potter admitted that trades' unions had indulged in fallacies and errors which they are learning now to put on one side. I cannot agree with him in reference to the question of piece-work. I have seen a great deal of brick-work executed and I cannot conceive any work more capable of being done on piece-work than brick-work. As regards Mr. Potter I cannot but admire much the sentiments which appeared to actuate him; but he is too theoretical. No doubt it is the combination of capital and labour which produces all our great work, and if it were possible to exactly adjust what each party should take—as his share of profit—that no doubt would be the right way of adjusting it, but that is extremely difficult and quite theoretical. Now the practical solution is the supply and demand. I think there is no better illustration of the power of supply and demand than in the case of the labour of domestic servants, which is familiar to us all. There has been no strike among them, and their wages have increased certainly 50 per cent. within thirty years. It is simply a question of supply and demand. If you want servants you know the difficulty of getting them, and the wages you must

now pay them—especially good ones—and the pay is in proportion to their efficiency. I do not ask the men, neither do I counsel them, to trust altogether to their employers. They might trust to the benevolence of such a master as the gentleman who had just sat down, but I ask them to trust to themselves. They have a perfect right to get the best wages they can for their work, but it is an utter fallacy to create rules which bring all men down to the same level, and Mr. Potter didn't contradict this. [Mr. POTTER.—We all contradict it.] Then that is a most satisfactory declaration to hear expressed in this room. Every one present must be gratified to hear that. [Mr. HOWELL.—There is no such rule in any trades' union in the Kingdom. Mr. POTTER.—We do not care how much you pay a man. We do not fix his wages.] I know an Alderman of the City of London, one of the Delegates to the Philadelphia Exhibition, who was interested principally in the stationery trade, and he came back impressed with the feeling that our stationery manufacture was leaving England for America. The wages are higher, but there are no restrictions. A man may work as long as he likes and as much as he likes, and it is the absence of these restrictions that is enabling that country to supersede us in that branch of the trade. For the first time it seems to me that the masters have been taking quite the right course in the masons' strike. They have not refused the men in any way. They have simply found the men would not work for what they consider a price remunerative to themselves, and they have exercised their unquestionable right to get their labour from elsewhere. The whole world belongs to us. We may invite other workmen here. The world is ours, and throughout the whole civilised world we have a perfect right to get our labour in the cheapest way we can. [A VOICE.—The workmen will emigrate.] Then it comes to a question of supply and demand. If the masters can't obtain labour cheaper abroad they must simply pay the wages the home people demand, and I do not blame the men for getting them; but do not let them obstruct other men who are willing to come and do just as good a day's work,

nor let them impose rules which make all men equal. Let there be free trade in labour on the part of the men as much as on the part of the masters. That is, I think, the right principle, and I hope and believe that that principle has prevailed in the late strike, and that we shall hear no more of the masons striking.

Lord HOUGHTON, D.C.L., &c., Hon. Associate:—I have had the honour before of meeting Mr. Potter upon one interesting occasion, in which there was a Committee appointed by the British Association to determine as far as possible upon scientific grounds the relations of capital to labour. We issued a little tract upon the subject which was the result of our investigation. We had the pleasure of meeting gentlemen of the same order of thought, including Mr. Lloyd Jones and others—most intelligent men who understood the subject perfectly, and we had more than once the opportunity of distinct conference between the persons powerfully representing the other side. The saddest part of that investigation, I think, was this, that those gentlemen produced the same arguments without being able to support them by any considerable amount of new facts. What I mean by new facts is this: they were not able to show us that these continuous strikes which have taken place throughout this great commercial country can be said to have paid themselves. When we consider the immense amount of money that has been sacrificed in these strikes, and what is much more unsatisfactory, the enormous amount of loss among the people which has been brought about by this enforced abstinence from labour, we come to the conclusion that although there must have been, and no doubt has been, a very considerable and legitimate increase of the profits of labour in several trades and professions, yet nevertheless there is every reason to believe much the same amount would have accrued if those agitations had not existed. I have no word to say in relation to the immediate effect of the masons' strike, further than that in my own sphere of life I do see the greatest disinclination of persons to spend money upon subjects connected with building in consequence of the uncertainty brought about by strikes.

The warning which has been given us is a very serious one, and I think it is more serious than could have been understood by the last speaker, when he spoke of the importation of foreign labour. Mr. Street, our chairman, knows well enough what the relations are of foreign labour and how difficult it is to acclimatise that labour. There is a difficulty about it which will always be very great, and I do not think that much benefit will arise in that direction. I do believe that the remedy really will be in the advance of education—education which shall instruct the people in the true principles and necessities of political economy. Surely we have had most serious warnings. Look at the present state of business. Look especially at the state of the coal and iron trades. Look at the condition of South Wales. With these things before us these gentlemen must surely see that there must be something paradoxical in their position, though I quite believe that they are honestly sincere, yet they may nevertheless in some cases be misled. It is a very grave but very interesting fact that although there has been an effort made the other day in America, where the Democratic Cabinet used their power with an intensity and severity which Government cannot assume in this country, that outbreak of a socialistic character was put down by the common sense of the people, although at a considerable sacrifice. With regard to the building trade, surely it is one in which the difficulty of this question must press upon you as strongly as possible. What was said by one gentleman in regard to the additional employment of machinery and the use of composite material with the concrete is of deep import to working men. These new things are being adopted every day, and I am certain within a few years, if this agitation does go on, you will find an entire change in the construction of the building trade of this country which will throw out of work a large portion of the skilled labour that now could find employment.

Professor KERR, Fellow.—I gather from the speeches of Mr. Howell and Mr. Potter, as representatives of the working classes, that they are willing to appeal to the body of architects as impartial and intelligent enough to be invited to give

their verdict upon the broad question now at issue. I will not take upon myself to speak for the body of architects or for the mass of the men in this room; but I have to suggest three propositions. I think architects at large, who, I may say, are most impartial judges on this question and most anxious that justice should be done on both sides, would be in the first place perfectly prepared to countenance and encourage trades' unions for all good purposes, because we ourselves know how good a purpose it serves for our own profession to be bound together in unity. But there are two things no architect will ever countenance as regards the policy of trades' unions as a matter of fact. The first is the attempt, whatever form it may assume, to equalise wages. That is a thing no architect would ever think to be either just or judicious. Secondly, he would not countenance the monstrously cumbrous, awkward, and wicked policy of strikes. There never can be an excuse for a strike in this world. On that, I believe, we would all agree. I am sorry these gentlemen should be in a minority, but I am afraid that is inevitable in the Institute of Architects. A strike is an act of open war, internecine war, war *à outrance*; and the object with which it is initiated is to destroy most effectually for the occasion the whole ground-work of peace policy. Now if there is anything which has benefited this country during recent times it is the peace in which we have been fortunately allowed to exist; and if there is anything which will benefit the working classes it is the pursuit of an undeviating policy of perfect peace. Common sense exists in this country almost in excess; at all events, we may certainly say that common sense may probably always be relied upon; and the common sense of the public is against those who fight. I have ventured to suggest—and the common sense of architects may be taken as representing the common sense of the public—that we shall never agree either to an equalisation of the wages of workmen, or to the policy of strikes.

Mr. Chatfield Clarke, Fellow.—I do not quite sympathise with the tone of our friend who has just sat down. I think it would be a great mistake if any representatives of

working men left this room without feeling that architects are able not only to a certain extent to understand the position they occupy but to appreciate it. Of course, in common with many of the other speakers, I cannot shut my eyes to the fact, as an architect, that there has been a decadence in the kind of work and in the quantity of work that one sees on one's buildings. With regard to the question of labour, I hold that the working man, as a free agent, has a perfect right to combine with his fellow men to raise his wages to any extent, where no intimidation is exercised upon the individual man himself. I put that as a sort of limitation upon the bent and genius of Professor Kerr's argument. Further than this (though I rejoice to believe that arbitration is the true ground for masters and men to meet upon in any question of difference of wage) I still believe and maintain that supposing the masters will not meet the men or the men the masters, a strike or a lock-out may become a necessity. Therefore I do not go so far as to say that a strike is a crime. However much we may regret the injurious character and operation of strikes, we cannot say that they are in any sense a crime, but rather that they are the unfortunate result of the antagonism between labour and capital, where neither party has met the thing in quite the right spirit. Don't think that I believe the effect of strikes has been good: I believe they have been most prejudicial, but on the other hand I think we ought to show the widest and deepest sympathy with the working men in their efforts to raise their position in the social scale, and we ought to try and place ourselves in their position and recollect what that position is, and that monetarily they have nothing to live by except by increasing their wage to the greatest extent.

Mr. Arthur Cates, Fellow.—I am able to offer a very apt illustration of the manner in which the working man endeavours to elevate the standard of his position, to increase the amount of his earnings, and to better his condition: an enterprising contractor in the west country, having large demand for worked granite, and desiring to introduce that admirable material extensively in the works on which he was

engaged, had to some extent been supplied from certain quarries where for perhaps sixty years the masons had worked piece-work. With a view to developing this trade he became the occupier of the quarries, and made arrangements for embarking a considerable capital in the works, premising that the labour would be carried on as heretofore; but no sooner had this capitalist desired to take labour into partnership with him, and to ensure the development of the profitable employment of labour and of capital, than the local society gave him notice that no more piece-work should be done, but all day-work was insisted on *at one rate of wages*. And this is a fair illustration of the course the working man thinks most adapted to advance his interests. [Mr. HOWELL.—Was that notice given by a union?] I apprehend by the Society of Granite Masons. [Mr. HOWELL.—We cannot test facts of this description without the name.] My correspondent does not specify the name of the society, but the quarries referred to are the Dartmoor Granite Quarries. The notice was received from a society. The result of this action taken by the masons or the society on their behalf, has been that my informant has been compelled to abandon the intention he had formed of developing the working of these quarries, and where perhaps 300 men might have had full and continuous employment, paid for in such a manner that each man's skill and physical power would have received its commensurate reward, without limit imposed on the extent of earnings, and a corresponding benefit would have been conferred on the whole locality—only some thirty men are now engaged in the preparation of pitching, the commonest form of labour, and this because, under the system insisted on by the men, the cost of production of work such as curbs, ashlar-plinths, moulded work, &c., like finished work, would cost some 25 or 30 per cent. more than under the old system. The same correspondent writes that for the execution of certain limestone welling, he, as on previous occasions, invited the masons to take it piece-work, but they objected, saying the society would not allow it, but only day-work. Further, when he attempted to measure what a man had done, to ascertain if he was earning

his pay, he was told that this was not allowed, and that if persisted in, a strike would ensue. I contribute these facts for the consideration of Messrs. Howell and Potter—facts which, unfortunately for the well-being and prosperity of the working man, are rather the rule than the exception.

Mr. TROLLOPE, Visitor.—I have known this trade for forty years. I think the whole question was raised at once by the first statement of Mr. Howell, who when speaking for the men said that the object of every man was to get the most he could and to do the least he could. That has been the point between the union and the employers of labour for the last twenty years. Allusion has been made to the strike of 1859, and ours was the firm struck against. I will tell the Meeting how that was brought about. We had some masons at work; my brother saw one man continually doing next to nothing, as he thought, and he said to the foreman:—'That man is always idling—discharge him.' The foreman said, 'I can't; he is a shop steward, and if I discharge him the whole of the men will leave.' My brother said, 'I can't stand this, I will have his work measured, and if he has not earned his wages he shall go.' The work that he had done in a week was found to be worth 15*s.* 6*d.*, and he was getting about 35*s.* The man was discharged, and on the Monday the whole of the masons left; and so began the strike of 1859. That principle has gone on more or less ever since. I can tell the Meeting a recent instance. A friend of mine, a contractor, was employed on a Gothic work, and a certain number of Gothic heads had to be done, and 5*l.* was allowed in the quantities for the performance of this work. The one was done as a model for the architect to see and put up in its place, and the architect approved it. The man had executed it fairly for 5*l.* or under. When the others were put in hand it was found they came to 8*l.* each. The man said, 'I mustn't say much about it, but the shop steward won't allow us to do them for 5*l.* He says they are worth 8*l.*, and we must make them come to 8*l.*' How is it possible for a master builder to estimate work under those circumstances? All competition contracts of that sort during the last few years

have been a mere toss-up. It is impossible to calculate the cost of labour. I am quite sure of this, that the men might earn more money if they were only true and honest. There need then be no disputes. I agree with everything Mr. Lucas has said. If we could get a profit of 10 per cent. upon labour we should be perfectly satisfied, but instead of that it has been too frequently a 10 per cent. loss as far as labour is concerned. The thing has come to such a pass that whether we introduce German labour or not, matters can't go on in the way they have been going for the past few years. Workmen must get out of their heads the principle of 'getting the most wages they can strike for, and then doing the least work they can.' I am sorry, but not surprised, to find this principle plainly stated by Mr. Howell.

Mr. CHRISTIAN, Fellow.—I am very glad to learn from Mr. Howell and Mr. Potter that it is conceded by trades' unions that men are now to be paid for their work according to its value. I see no objection to a minimum wage, but let the men who earn more be paid as much as they can get. I should like to state a fact that happened in my own experience thirty-eight years ago, when I was superintending the building of a church, as Clerk of the Works. A few years before I had been advised by a shrewd Scotch builder that if ever I had the opportunity of superintending work in that capacity I should not fail to value everything that was done as it went on. I did so, and I have taught many young men, much to their own advantage, to do the same since. During the progress of the works it so happened that there were twelve masons under one shed, and in one particular week they each had to work exactly the same thing, a plain moulded capital. Of these twelve men, the first did his work better and quicker than any other man, finishing it in three days. The second man was quite four days, another four and a half, others five or more, and the worst six, and that man (because he was a setter) was paid *5s.* 6*d.*, all the other men *5s.* It struck me at the time as most unjust that this first man, who did his work so well and so quickly, should be paid no more than the slower men, when he ought, accord-

ing to value, to have been paid double as much as the last. Is it possible for architects to approve of such a system as that? It is hardly necessary in this room to repudiate the notion of Mr. Howell that it is the nature of all men to wish to do the least possible amount of work for the greatest amount of pay. I don't believe that it is the wish of any man whatsoever *who is worth his salt* to act on such a principle, and I am quite sure that if he did act upon it he would deservedly suffer.

Mr. LASCELLES, Visitor.—As a small employer of labour may I be allowed to give you my experience, as it somewhat differs from that of Mr. Lucas and Mr. Trollope? I do not pretend to have carried on works that can compare in magnitude to theirs. My work has been on a smaller scale. I have always found the men to be most industrious, and have never had the experience of a strike. I believe that my men do quite as much work as they did twenty years ago. I am not speaking of bricklayers—my experience being confined almost exclusively to joiners. I have always found the men most desirous to do all they could for the welfare of the business and assist me in every possible way. It would not be right for me to sit and hear so much against the men, when I have found them my best friends and when I cannot speak too highly in their praise. One remark has been made as regards the rate of wages. I think we are labouring under a misapprehension on that score. I fancy the sum fixed by the trades' unions is the minimum amount, and the men may earn more if they can, and sometimes do. I am told every man to be a member of the union shall be a man capable of earning a certain amount of wages in order that it may be some gauge as to his ability. They fix a minimum rate of wages, and I think if a man can earn more they are only too glad for him to do so. As regards piece-work, mine is a piece-work shop, and it is known to be such. There have been men connected with trades' unions who have worked for me, and very good men indeed they are. One of the best men in my employ is such a man, and at a meeting of the trades' unions in the park some ten or twelve years ago I

know he was on the committee. He is a very industrious man and has studied my interests for many years, and I should never wish to have a better man in my employ.

A FELLOW.—Would the last speaker say whether the great bulk of his men are not non-union men?

Mr. LASCELLES.—It is possible they may be; I have never inquired. I know I have at least one union man, and there may be a hundred. My shop has gone on for forty years and has never been closed a day. We have never had any dispute.

Mr. LUCAS.—I repeat that whatever I receive for labour I will give to the men less 10 per cent. We do not profess to carry out works at less than 10 per cent. profit, and I do not believe any man can do so. What that gentleman (Mr. Lascelles) stated as his experience of the joiners, I can also state, but I spoke of out-door works, and there is not done that quantity which ought to be.

Mr. HENFREY, Visitor, said:—As a contractor for the last thirty-five years, he had heard with some amazement two statements: one from Mr. Howell to the effect that brick-work could not well be carried out by piece-work; the other from Mr. Lucas, that the labour on the brick-work at the York Station had cost 5*l.* per rod, equal to about 9*s.* per cube yard, in consequence of the trades' union compelling him to employ day-men only. He remembered building a railway viaduct in Manchester about the year 1844. The labour of the brick-work was all let piece-work at prices varying from 1*s.* 10*d.* per cube yard for foundations to 3*s.* per cube yard for 14-inch parapets. From the statements made, bricklayers' wages have risen about 50 per cent. since 1844, and this should make parapets, or similar expensive work, worth 4*s.* 6*d.* per cube yard at the present time. To this we must add other 4*s.* 6*d.* for the indolence, or want of skill, of the York bricklayers, to arrive at the cost of 9*s.* per cube yard, which Mr. Lucas had to pay in consequence of the interference of the trades' union.

The CHAIRMAN, in closing the discussion, said,—We have arrived at that point at which, if it is the desire of the Meeting, we can adjourn to our next gathering, a fortnight hence;

but if you feel that there is no reason for discussing the question further, it will be now necessary to conclude the present proceedings. I would only say a very few words. I have been very much pleased to see the good temper with which this discussion has been carried on, and my only regret is that we have not had more representatives of the masons and the working classes present than we have had. Unfortunately, I called upon one of them at the very outset and put him in this way a little at a disadvantage, for which I have to apologise to him. I think that Mr. Brassey put before us very clearly the statement of the case—more clearly, indeed, than we have had it dealt with by anybody this evening. He pointed out very fairly that the increased cost of living, and of everything that the working man has to provide, justified a considerable advance of wages. The question, as he put it, appears to me to resolve itself into one simply of supply and demand. He has pointed out what has not been commented on to-night, and what is of the greatest importance, that the common labourer, who is not benefited by any trades' society, has increased his wages during the period to the extent of about 64 per cent., while the skilled mechanic has only increased his by 50 per cent. Speaking for architects, but with the most kindly feeling for working men, I must say that the result of my experience is certainly very much to confirm what is said by Mr. Lucas and others on that side—that we do not get at the present day the same amount of work that we used to get, that the quality has not a tendency to improve, and that, in spite of the statements which Mr. Howell and Mr. Potter make—that they only fix the minimum amount any man may earn, as a mere matter of fact, fixing a minimum rate must almost always fix a uniform and maximum rate also. The result is that we see, for instance, such a class as the masons, with whom I personally am most concerned, who work upon Gothic architecture—and it requires a very skilled mason to make a good Gothic workman—compelled to work—and it is monstrous that it should be so—at the same wages as the man who does an altogether inferior sort of work. Certainly on

these terms nobody will rise from a dead level. The workmen's object should be just what the object of the architect is, to encourage the good workman and to let the rest see before them the example he sets, and the much higher position in which he stands, by reason of his ability and the superior quality, and perhaps quantity too, of the work he does. How do you suppose men rise in other professions? By doing, not as little as they can, but as much as they can, in hours far longer than those of the workman, and therefore, if it is the result of the action of trade societies that men are limited in the amount of work they are allowed to do, they are condemned, not by a hostile critic, but, in my case, by one who is very anxious to see the working man get his rights, and who is most emphatically opposed to the notion of there being any 'wickedness'—though too often much want of prudence—in strikes. I see no wickedness in a strike, so long as it is to obtain a fair day's pay for a fair day's work. The wickedness is when it prevents the best workman from earning the best wages, and in spite of any denial one does often find particular workmen objected to because they do too much work. I have myself known such cases as that quoted by Mr. Cates, and of which he gave us the particulars. They are not imaginary cases. An architect who goes about the country as I do meets with these difficulties in all directions, and knows that they do occur; and without knowing what all the rules are, and what all the exact decisions of the societies may be on the subject, that is one of the practical results of their action. The statement that they only insist upon a minimum amount of wages is at the same time met, unless I am very much mistaken, by the fact that, if a builder proposed to give two rates of wages, nearly all the men who work for him would probably absent themselves forthwith. My own experience is certainly of that kind. The societies undoubtedly interfere more or less with the freedom of the workman. The discussion we have had to-night, if it does nothing else, will show the representatives of the working classes how little hostility there is to them or to their true interest, and I must say that I think

the speech of Mr. Lucas was creditable to him in every way. I trust that the outcome of all this will be that workmen will consider, if, at the present moment, they are defeated in the attempt they have made to raise their wages beyond a certain point, still that the masters have their interests necessarily just as much as their own in view; for what they have to consider is, whether in granting an increase of wages they won't be ruining the business that keeps them both? What Mr. Lucas has said about the replacement of brick-work by concrete is quite true. The tendency of the rules which the societies are making is to destroy all art. If we dare to have nothing but concrete done by labourers at the lowest wages, and if stone-masonry and good brick-work are to become things of the past, I think that good architecture will also entirely disappear from the field, and that we as architects shall have to give up our work. Therefore, in the interests of my profession, and in the interests of the workmen, I appeal to the representatives of the working men to-night to reconsider their position; and I do hope that sooner or later these rules of the societies (which are so mysterious that when they are quoted on the one side they are always denied on the other), shall be so far modified as to encourage good work and honest work, and to render it impossible for anybody long to say, as it has been said this evening —and in a way that most of us, from our experience, could confirm—that, as a rule, men do not feel it their duty to do the greatest amount of work in the best way and in the shortest time.

The discussion on Mr. Brassey's Paper having thus been brought to a close, the Meeting adjourned.

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